

DOCUMENT 00405

MEASUREMENT AND PAYMENT

A. MEASUREMENT AND PAYMENT:

1. Measurement of completed Work Items shall be made in individual unit price or as a lump sum item.
2. Payment for completed Work items shall be made at the unit price or lump sum bid price as contained in the "Bid Proposal", for the item. Payment will include all costs associated in furnishing labor, tools, equipment, materials, testing, etc.

Payment shall be for completed Work, as specified, and as indicated in the Contract Documents or on the Drawings.

B. BID ITEM – DESCRIPTION OF WORK AND PAYMENT:

Schedule A: Waterline Improvement from Sta 0+0 (golf course) to Sta 13+14 (Union Pacific Railroad)

Bid Item A1. Mobilization.

Mobilization shall include the costs for all preparatory work and operations, such as movement of personnel, supplies and incidental items to the project site; all costs associated with securing all bonds and insurance, establishment of all facilities necessary for work on the project; obtaining UDOT permits, furnishing, erecting and maintaining construction signs and barricades, preparing employee notification boards; daily sweeping/cleaning roadways and/or project site; and all other work and operations which must be performed, or costs incurred prior to beginning work on the project or during work on the project.

Includes the costs associated with obtaining and submitting all bonds and insurance forms required by UDOT and Riverdale City.

The contractor shall assume the sole and complete responsibility for the job site conditions during the course of construction of the project, including the safety of all persons and property. This requirement shall apply continuously and not be limited to normal working hours.

The contractor shall ensure that all trees and vegetation within the project area are protected from any damage. Trees and shrubs shall be pruned by a licensed tree specialist as required.

Payment includes all costs associated for the Contractor to locate all underground utilities, contacting Blue Stakes, and coordinating with all utilities prior to laying pipe within 200 feet of said utilities which may be exposed, damaged, or crossed as shown on the drawings or as identified by Blue Stakes marking. Payment includes all cost associated for the Contractor to coordinate with the utility company to move or support the utility as necessary.

Utilities to be located will include, but not limited to, utilities in the I-84 UDOT ROW and on north and south of ROW to project extents. Existing storm drain systems, existing irrigation systems, existing natural gas main lines and service lines, existing telephone cables, existing power lines, existing fiber optic lines, and existing water lines. Includes the placement of steel traffic plates as required for coordination with the utility companies and Utah Department of Transportation.

No additional payment shall be made for “down time” associated with delays required to coordinate and resolve utility conflicts, utility relocation, and project design modifications as required.

The contractor shall obtain all right-of-access permission to enter upon private property to perform the necessary work and shall restore all private property to pre-construction conditions or better.

This requirement shall apply continuously and not be limited to normal working hours. This requirement includes maintaining reasonable daily access for the pedestrian trail and all roadway’s associated with the project noted above, during the daily construction period and unrestricted access during non-work times, including evenings, weekends, and holidays.

Shall include all work required to maintain environmental control (24-hours) as required. Shall include all work required to maintain dust control (24-hours) as required.

Payment shall be at a lump sum bid price and shall be paid as follows: Payment of 75% with the 1st payment request and the remaining 25% with the final payment request.

Bid Item A2. Traffic Control.

Traffic control & flagging shall include all costs associated with the directional boring, placement, and connection of the HDPE waterline and improvement project. The contractor shall provide qualified personnel & equipment to perform all required traffic control around the site as per UDOT standards and the Manual on Uniform Traffic Control Devices for Streets & Highways (MUTCD) specifications. The walking trail and roadway are to remain open to traffic, both pedestrian and vehicle, at all times, any proposed lane closures must be submitted and approved prior to starting work.

Payment shall be at a lump sum bid price and shall be paid as follows: Payment of 75% with the 1st payment request and the remaining 25% with the final payment request.

Bid Item A3. Storm Water Pollution Prevention Plan (SWPPP).

The contractor shall include all costs associated with storm water pollution prevention plans (SWPPP), installation of best management practices (BMP's) required by the SWPPP, maintaining the SWPPP and all other items associated with the SWPPP throughout the duration of the project. The contractor is responsible for developing and maintaining his own (SWPPP) plan. The Contractor shall assume all responsibility and liability associated with his SWPPP, complete.

Payment shall be at a lump sum bid price and shall be paid as follows: Payment of 75% with the 1st payment request and the remaining 25% with the final payment request.

Bid Item A4. Pothole existing waterline.

Includes all related potholing, earthwork; excavating to the required depth; all necessary labor, supervision, tools, equipment, permits and incidentals to excavate, identify and survey the utility, including backfilling and compacting materials to the required elevations, complete.

This item is to locate the waterline in the following locations:

- 1.) Sta 0+45.00 LT 27.00. At the golf course to the south of the right of way fence,
- 2.) Sta 0+80.00 LT 12.00. Near the south side of I-84 East bound lanes,
- 3.) Sta 2+26.00 LT 5.00 Between the East and West bound lanes of I-84,
- 4.) Sta 5+70.00 RT 4.50. The east side of Weber River next to the trail,

Payment shall be by the unit bid price for each pothole existing waterline, complete.

Bid Item A5. Waterline connection at Sta 0+45.00 LT 27.00. Connect existing 10-inch pvc to new 10-inch pvc waterline with appropriate fittings & bends.

Includes all related earthwork; excavating trenches to the required depths; backfilling and compacting materials in trenches including pipe bedding and

trench backfill; dewatering as required; furnishing and installing 10-inch pvc C900 DR18 waterline piping, installing detectable wire and location marking tape, installing fittings, (tees, including fire hydrant tees, bends, sleeves, reducers, caps, plugs and restrained joint fittings not specified in other bid items), and accessories; pressure testing of new waterline; chlorinating, disinfecting, and flushing of the new waterline; and all other appurtenant work, complete.

- a. Excavated trench materials shall be required to be re-used as backfill if the materials meet specifications and approval by the Engineer. Includes locating utilities to determine conflicts and installing waterline to avoid said conflict.
- b. Includes all related costs to locate all utilities ahead of the construction, during the installation of the waterline.
- c. Coordinate with Schneider's Riverside Golf Course for access to the area outside of UDOT right of way on south side of east bound lanes.

Payment shall be by the unit bid price for waterline connection at Sta 0+45.00 LT 27.00, complete.

Bid Item A6. Furnish 10-inch gate valve.

Includes furnishing and supplying gate valve, valve box, thrust blocks. Installation shall be part of waterline installation.

Payment shall be by the unit bid price for each gate valve furnished, complete.

Bid Item A7. Furnish and install 10-inch pvc C900 DR18 waterline; Sta 0+45.00 LT 27.00 to Sta 0+80.00 LT 12.00.

Includes all related earthwork; excavating trenches to the required depths; backfilling and compacting materials in trenches including pipe bedding and trench backfill; dewatering as required; furnishing and installing pvc, C-900, DR18 waterline piping, installing detectable wire and location marking tape, installing fittings, (valves, tees, including fire hydrant tees, bends, sleeves, reducers, caps, plugs, thrust blocks and restrained joint fittings not specified in other bid items), and accessories; pressure testing of new waterline; chlorinating, disinfecting, and flushing of the new waterline; and all other appurtenant work, complete.

- a. Excavated trench materials shall be required to be re-used as backfill if the materials meet specifications and approval by the Engineer. Includes locating utilities to determine conflicts and installing waterline to avoid said conflict.

- b. Includes all related costs to locate all utilities ahead of the construction and to provide for support of the utility, including power pole support, during the installation of the waterline.
- c. Coordinate with Schneider's Riverside Golf Course for access to the area outside of UDOT right of way on south side of east bound lanes.
- d. Protect UDOT Right of way fence from damage. Any damage done to the fence will be repaired to the owners standards at the contractors expense.

Payment shall be by the unit bid price for each linear foot of 10-inch pvc C900 DR18 waterline furnished and installed, complete.

Bid Item A8. Furnish and install 12-inch HDPE, SDR 11 waterline; Sta 0+45.00 LT 27.00 to Sta 0+80.00 LT 12.00.

Includes all related earthwork; excavating trenches to the required depths; backfilling and compacting materials in trenches including pipe bedding and trench backfill; dewatering as required; furnishing and installing pvc, C-900, DR18 waterline piping, installing detectable wire and location marking tape, installing fittings, (valves, tees, including fire hydrant tees, bends, sleeves, reducers, caps, plugs, thrust blocks and restrained joint fittings not specified in other bid items), and accessories; pressure testing of new waterline; chlorinating, disinfecting, and flushing of the new waterline; and all other appurtenant work, complete.

- e. Excavated trench materials shall be required to be re-used as backfill if the materials meet specifications and approval by the Engineer. Includes locating utilities to determine conflicts and installing waterline to avoid said conflict.
- f. Includes all related costs to locate all utilities ahead of the construction and to provide for support of the utility, including power pole support, during the installation of the waterline.
- g. Coordinate with Schneider's Riverside Golf Course for access to the area outside of UDOT right of way on south side of east bound lanes.
- h. Protect UDOT Right of way fence from damage. Any damage done to the fence will be repaired to the owners standards at the contractors expense.

Payment shall be by the unit bid price for each linear foot of 12-inch HDPE, SDR 11 waterline furnished and installed, complete.

Bid Item A9. Waterline connection at Sta 0+80.00 RT 12.00; Electrofuse 12-inch HDPE to existing 12-inch HDPE.

Includes all related earthwork; excavating trenches to the required depths; backfilling and compacting materials in trenches including pipe bedding and trench backfill; dewatering as required; furnishing and installing HDPE SDR-11 waterline piping, installing detectable wire and location marking tape, installing fittings, (tees, including fire hydrant tees, bends, sleeves, reducers, caps, plugs and restrained joint fittings not specified in other bid items), and accessories; pressure testing of new waterline; chlorinating, disinfecting, and flushing of the new waterline; and all other appurtenant work, complete.

- d. Excavated trench materials shall be required to be re-used as backfill if the materials meet specifications and approval by the Engineer. Includes locating utilities to determine conflicts and installing waterline to avoid said conflict.
- e. Includes all related costs to locate all utilities ahead of the construction and to provide for support of the utility, including power pole support, during the installation of the waterline.
- f. Includes all costs of HDPE thrust anchors and or blocks, HDPE and PVC restrained joints, etc.
- g. Includes all fittings and costs to electro fuse new HDPE to existing HDPE pipe.

Payment shall be by the unit bid price for waterline connection at Sta 0+80.00 RT 12.00, complete.

Bid Item A10. Waterline connection at Sta 2+26.00 LT 5.00; Electrofuse existing 12-inch HDPE to 12-inch HDPE.

Includes all related earthwork including excavating, backfilling and compacting the boring and receiving pits; furnishing, installing and removing required shoring; dewatering as required for the project duration; removal and disposal of excavated unused materials; construction of equipment support pads and landing; backfilling any pits created for installation and compacting the materials in lifts as specified and directed by the Engineer; the pit size shall be as required by the contractor to perform the work; furnishing and installing the 12" diameter HDPE waterline by horizontal directional drilling, complete.

- a. Excavated trench materials are to be re-used as backfill if the materials meet specifications and are approved by the Engineer.
- b. Includes locating existing utilities to determine conflicts and resolving any conflicts per direction of the Engineer.

- c. Includes all costs of HDPE thrust anchors and or blocks, HDPE and PVC restrained joints, etc.
- h. Includes all fittings and costs to electro fuse new HDPE to existing HDPE pipe.

Payment shall be by the unit bid price for waterline connection at Sta 2+26.00 LT 5.00, complete.

Bid Item A11. Furnish and install 12-inch HDPE, SDR 11, waterline by directional boring; Sta 2+26.00 LT 5.00 to Sta 5+70.00 RT 4.50.

Includes all related earthwork including excavating, backfilling and compacting the boring and receiving pits; furnishing, installing and removing required shoring; dewatering as required for the project duration; removal and disposal of excavated unused materials; construction of equipment support pads and landing; backfilling any pits created for installation and compacting the materials in lifts as specified and directed by the Engineer; the pit size shall be as required by the contractor to perform the work; furnishing and installing the 12" diameter HDPE waterline by horizontal directional drilling, complete.

- a. Excavated trench materials are to be re-used as backfill if the materials meet specifications and are approved by the Engineer.
- b. Includes locating existing utilities to determine conflicts and resolving any conflicts per direction of the Engineer.
- c. Includes all costs of HDPE thrust anchors and or blocks, HDPE and PVC restrained joints, etc.
- i. Includes all fittings and costs to electro fuse new HDPE to existing HDPE pipe.

Payment shall be by the unit bid price for each linear foot of 12" HDPE waterline furnished and installed by horizontal directional drilling, complete.

Bid Item A12. Added cost per foot for encountering cobble rock 6-inch and greater.

Includes all related tools and equipment to bore through earth with cobble rock 6" or greater. Backfilling the pit and compacting the materials in lifts as specified and directed by the Engineer; the pit size shall be as required by the contractor to perform the work; furnishing and installing the 12" diameter HDPE waterline by horizontal directional drilling, complete.

- a. Excavated trench materials are to be re-used as backfill if the materials

meet specifications and approved by the Engineer.

- b. Includes all costs of special drilling tips and equipment to bore through dirt with cobble rock 6" or greater.

Payment shall be by the unit bid price for each linear foot for cobble rock infused soil, complete.

Bid Item A13. Added cost per foot for encountering solid rock.

Includes all related tools and equipment to bore through solid rock. Backfilling the pit and compacting the materials in lifts as specified and directed by the Engineer; the pit size shall be as required by the contractor to perform the work; furnishing and installing the 12" diameter HDPE waterline by horizontal directional drilling, complete.

- a. Excavated trench materials are to be re-used as backfill if the materials meet specifications and approved by the Engineer.
- b. Includes all costs of special drilling tips and equipment to bore through solid rock.

Payment shall be by the unit bid price for each linear foot of solid rock, complete.

Bid Item A14. Flowfill and abandon 10-inch existing waterlines.

Includes all related earthwork including excavating, backfilling, and compacting; locating existing pipes; saw-cutting pipes as required; furnishing and installing grout (UDOT specification section 03575) fully filling the, approximately 166-feet of abandon 10-inch waterline (approx. 6± cy.) from end to end (center vent may be required) as directed by the City Engineer and UDOT Engineers; and all other appurtenant work associated, complete.

The pipe to be grouted extends from the UDOT right of way fence on the south side to the right of way fence on the north side. The pipe includes the existing abandoned waterline under the east bound lanes.

Payment shall be by the cubic yard bid price for the furnish and install of the grout, complete.

Bid Item A15. Connect 12-inch HDPE to 10-inch PVC waterline with appropriate fittings & bends; ~Sta 5+70.00 RT 4.50.

Includes all related earthwork; excavating, backfilling, and compacting materials

in trenches; pipe bedding and trench backfill; dewatering as required; furnishing and installing restrained joint fittings, concrete thrust blocks and accessories, and all other appurtenant work, complete.

- a. Excavated trench materials may be re-used as backfill if the materials meet specifications.
- b. Waterline pipe shall be paid in the appropriate bid item.

Payment shall be by the unit bid price for connect 12-inch HDPE to 10-inch PVC to HDPE connection made, complete.

Bid Item A16. Reconnection of the 2-inch culinary water service lateral to the main line.

Includes all related earthwork including excavating, backfilling and compacting; furnishing and installing new double strap brass saddle, installing the corporation stop on the new saddle; disconnecting the existing service lateral from the existing water meter; connecting the new water service lateral pipe to the new corporation stop and water meter; and all other appurtenant work, complete.

Includes all necessary labor to flush and clear debris that may collect in fixtures down stream of connection.

Payment shall be by the unit bid price for each lateral connection made, complete.

Bid Item A17. Furnish & install 2-inch dia. water service to new 10-inch PVC waterline.

Includes all related earthwork; excavating trenches to the required depths; backfilling and compacting materials in trenches including pipe bedding and trench backfill; dewatering as required; furnishing and installing 2" poly waterline piping, fittings and accessories; from the new water main to existing water meter; removing and disposing of the old water service lateral piping; and all other appurtenant work, as directed by the engineer, complete.

- a. Excavated trench materials shall be required to be re-used as backfill if the materials meet specifications and is approval by the Engineer.
- b. Includes all associated work to notify of water shut-down, flush and or repair the existing culinary water residential/commercial service facilities, as required, complete. Includes all necessary labor and material to flush and clearing all debris that may collect in down stream fixtures or equipment.

Payment shall be by the unit bid price for each linear foot of 2-inch poly water service lateral piping furnished and installed, complete.

Bid Item A18. Furnish and install 10-inch PVC, C900 DR-18, waterline; Sta 5+70.00 RT 4.50 to Sta 13+0.00 RT 0.00.

Includes all related earthwork; excavating trenches to the required depths; backfilling and compacting materials in trenches including pipe bedding and trench backfill; dewatering as required; furnishing and installing pvc, C-900, DR18 waterline piping, installing detectable wire and location marking tape, installing fittings, (valves, tees, including fire hydrant tees, bends, sleeves, reducers, caps, plugs, thrust blocks and restrained joint fittings not specified in other bid items), and accessories; pressure testing of new waterline; chlorinating, disinfecting, and flushing of the new waterline; and all other appurtenant work, complete.

- i. Excavated trench materials shall be required to be re-used as backfill if the materials meet specifications and approval by the Engineer. Includes locating utilities to determine conflicts and installing waterline to avoid said conflict.
- j. Includes all related costs to locate all utilities ahead of the construction and to provide for support of the utility, including power pole support, during the installation of the waterline.
- k. Coordinate with Schneiter's Riverside Golf Course for access to the area outside of UDOT right of way on south side of east bound lanes.
- l. Coordinate with Bach Homes (307)277-0527 for work between the river and the railroad tracks.
- m. Protect UDOT Right of way fence and walking trail from damage. Any damage done to the fence or walking trail will be repaired to the owners standards at the contractors expense.

Payment shall be by the unit bid price for each linear foot of pvc C900 DR18 waterline furnished and installed, complete.

Bid Item A19. Furnish 1-inch diameter clean gravel pipe bedding materials.

Includes furnishing 1-inch clean gravel backfill for pipe bedding, as directed by the Engineer.

- a. Placement and compaction of gravel bedding materials for pipe shall be paid under the bid item, which utilizes bedding backfill materials, and not to be paid as part of this item.

Payment shall be by the unit price for each ton of gravel bedding material furnished only. Weight tickets must be submitted to the Engineer in order to

document the tonnage.

Bid Item A20. Furnish clean import material for trench backfill.

Includes furnishing clean non-recycled structural backfill material, as directed by the Engineer.

- a. Placement and compaction of non-recycled structural backfill materials for pipeline trenches shall be paid under the bid item, which utilizes structural backfill materials, and not to be paid as part of this item.

Payment shall be by the unit price for each ton of structural backfill material furnished only. Weight tickets must be submitted to the Engineer in order to document the tonnage.

Bid Item A21. Adjust valve box ring and cover to finish grade.

Includes all related earthwork including excavation, backfilling, compacting, and grading; all tools, labor and materials required to adjust the valve box ring and cover to finish grade; furnishing and installing roadbase course under concrete collar; furnishing and installing concrete collar (8-inch thick minimum) around the adjusted valve box ring and cover; and all appurtenant work, complete.

Concrete collar shall be kept 1/4" below the finish asphalt pavement.

Payment shall be by the unit bid price for each valve box ring and cover adjusted to finish grade, complete.

Bid Item A22. Remove and replace all landscaping improvements, public/private damaged during construction.

Includes all related earthwork; removing and disposing of unsuitable materials as required; furnishing, installing and grading the existing ground surface and/or all imported topsoil; furnishing and placing lawn sod as required on public/private property; matching sod joints, type, and elevations; initial watering of newly placed sod (watering required for 2-weeks or from when restoration of the irrigation system is complete); restoring all vegetation adjoining the roadways and walking trail; vegetation to match adjoining vegetation, etc.; protecting and/or replacing existing appurtenances such as sprinklers, rocks, lawn decorations, fences, walls, lawn sod, trees, brick pavers, stamped concrete, shrubbery, concrete curbing, sprinkler system equipment, gates, signs and all landscaping items, replacing all damaged items; and all other appurtenant work, complete.

- a. All lawn sod shall be approved by golf course personnel and placed with 5-inches of topsoil as bedding material.

- b. The minimum width of sod patch shall be 12-inches.
- c. The Contractor is responsible for all landscape replacement and coordination with the affected property owners, complete.
- d. Contractor is to protect right of way fence in place. Any damage to right of way fence is to be repaired to UDOT standards at no cost to the city.
- e. Areas adjoining the freeway and across the field are to be reseeded with native water wise grass/plant blend.

Payment shall be at a square foot bid price for the removal and replacement of the landscaping improvements, complete.

Bid Item A23. Furnish & install 10-inch gate valve; Sta 13+00 RT 0.00.

Includes furnishing and supplying gate valve, valve box, thrust blocks, concrete collar for the valve box and all appurtenances as noted on drawings. Installation shall be part of waterline installation.

Payment shall be by the unit bid price for each gate valve furnished and installed, complete.

**Bid Item A24. Waterline connection at Sta 13+14.00 RT 0.00;
(If railroad permit not issued prior to construction).**

Includes all related earthwork including excavating, backfilling, and compacting; locating existing pipes; saw-cutting pipes as required; furnishing and installing all associated piping, pipe fittings (bends, tees, crosses, sleeves, reducers, etc.), valve boxes, concrete collar for valve boxes, restrained joint fittings and concrete thrust blocks; disconnecting waterlines and fittings, capping and abandoning waterlines, removing abandoned valve boxes and valves as required; and all other appurtenant work, complete.

Includes 24- hour (minimum) notification to the affected residences prior to the water shutoff.

Schedule B: Waterline Improvement from Sta 13+14 to Sta 14+50 (crossing under the Union Pacific Railroad).

Bid Item B1. Mobilization (If railroad permit not issued prior to construction).

Mobilization shall include the costs for all preparatory work and operations, such as movement of personnel, supplies and incidental items to the project site; all

costs associated with securing all bonds and insurance, establishment of all facilities necessary for work on the project; furnishing, erecting and maintaining construction signs and barricades, preparing employee notification boards; daily sweeping/cleaning roadways and/or project site; and all other work and operations which must be performed, or costs incurred prior to beginning work on the project or during work on the project.

Includes the costs associated with obtaining and submitting all bonds and insurance forms required by Riverdale City.

The contractor shall assume the sole and complete responsibility for the job site conditions during the course of construction of the project, including the safety of all persons and property. This requirement shall apply continuously and not be limited to normal working hours.

The contractor shall ensure that all trees and vegetation within the project area are protected from any damage. Trees and shrubs shall be pruned by a licensed tree specialist as required.

Payment includes all costs associated for the Contractor to locate all underground utilities, contacting Blue Stakes, and coordinating with all utilities prior to laying pipe within 200 feet of said utilities which may be exposed, damaged, or crossed as shown on the drawings or as identified by Blue Stakes marking. Payment includes all cost associated for the Contractor to coordinate with the utility company to move or support the utility as necessary.

Utilities to be located will include, but not limited to, existing storm drain systems, existing irrigation systems, existing natural gas main lines and service lines, existing telephone cables, existing power lines, existing fiber optic lines, and existing water lines.

No additional payment shall be made for “down time” associated with delays required to coordinate and resolve utility conflicts, utility relocation, and project design modifications as required.

The contractor shall obtain all right-of-access permission to enter upon private property to perform the necessary work and shall restore all private property to pre-construction conditions or better.

The contractor shall assume the sole and complete responsibility for the job site conditions during the course of construction of the project, including the safety of all persons and property. This requirement shall apply continuously and not be limited to normal working hours. This requirement includes maintaining reasonable daily access for the pedestrian trail and all roadway's associated with the project noted above, during the daily construction period and unrestricted access during non-work times, including evenings, weekends, and holidays.

Shall include all work required to maintain environmental control (24-hours) as

required. Shall include all work required to maintain dust control (24-hours) as required.

This item will only be used if the railroad permit is not in place prior to the contractor reaching the west side of the railroad right of way. Or if Riverdale City determines it is necessary to wait on the crossing of the railroad until the water can be shut down (more than 2 week wait time).

Payment shall be at a lump sum bid price and shall be paid as follows: Payment of 75% with the 1st payment request and the remaining 25% with the final payment request.

**Bid Item B2. Storm Water Pollution Prevention Plan.
(If railroad permit not issued prior to construction).**

The contractor shall include all costs associated with storm water pollution prevention plans (SWPPP), installation of best management practices (BMP's) required by the SWPPP, maintaining the SWPPP and all other items associated with the SWPPP throughout the duration of the project. The contractor is responsible for developing and maintaining his own (SWPPP) plan. The Contractor shall assume all responsibility and liability associated with his SWPPP, complete.

This item will only be used if the railroad permit is not in place prior to the contractor reaching the west side of the railroad right of way. Or if Riverdale City determines it is necessary to wait on the crossing of the railroad until the water can be shut down (more than 2 week wait time).

Payment shall be at a lump sum bid price and shall be paid as follows: Payment of 75% with the 1st payment request and the remaining 25% with the final payment request.

Bid Item B3. Pothole existing waterline.

Includes all related potholing, earthwork; excavating to the required depth; all necessary labor, supervision, tools, equipment, permits and incidentals to excavate, identify and survey the utility, including backfilling and compacting materials to the required elevations, complete.

This item is to locate the waterline in the following locations:

1.) Sta 14+45.00 RT 5.65, East side of railroad tracks.

Payment shall be by the unit bid price for each pothole existing waterline, complete.

Bid Item B4. Railpros Field Services/Track Monitoring for railroad crossing.

Includes all related fees and work services as required by Railpros Field Services and Union Pacific Railroad agreements. Contractor shall adhere to the requirements as stated in the UPRR and Railpros attachments in the Contract Documents; includes track monitoring plan, and track monitoring, work plan, shoring plan, etc. The contractor will be responsible for all costs incurred as a result of working with Railpros to provide the necessary inspections and monitoring for the installation of the 18-inch 0.5-inch thick steel sleeve extensions with end caps and the 10-inch pvc, DR-18, C-900 culinary water pipe with spacers under the UPRR tracks. Contractor shall coordinate all inspections and monitoring required, complete.

If surveying is required, see bid item B15.

Payment shall be by the unit bid price for each day required for Railpros Field Services/Track Monitoring for railroad crossing, complete.

**Bid Item B5. Waterline connection at Sta 13+14.00 RT 0.00;
(If railroad permit not issued prior to construction).**

This item will only be used if the railroad permit is not in place prior to the contractor reaching the west side of the railroad right of way. Or if Riverdale City determines it is necessary to wait on the crossing of the railroad until the water can be shut down (more than 2 week wait time).

Payment shall be by the unit bid price for waterline connection at Sta 13+14.00 RT 0.00, complete.

Bid Item B6. Remove and dispose of existing 10-inch waterline.

Includes all related earthwork including excavating, backfilling and compacting; removing and disposing of the existing 10-inch gate valve and existing 10-inch waterline pipe within UPRR right-of-way/and under the tracks; and capping/sealing abandoned pipe to the west; removing and disposing of excess and unsuitable materials to provide proper connections to the new work; and all other appurtenant work, complete.

Payment shall be by the unit bid price per lineal foot of waterline pipe removed and disposed, complete.

Bid Item B7. Add for bid item B7 if existing waterline removed is asbestos cement.

This bid item is for additional cost incurred if the waterline to be removed and

disposed, in bid item B7 above, of off site is asbestos cement waterline. This bid item will be the additional costs to properly remove and dispose of each foot of waterline, complete.

Payment shall be by the unit bid price per lineal foot of A/C pipe removed and disposed, complete.

Bid Item B8. Furnish and install 18-inch sleeve extension on both sides of the tracks.

Includes furnishing and installing 55-foot of 0.5-inch thick, 18-inch diameter steel pipe; approximately 10-foot on the west side of the railroad tracks and 45-foot on the east side of the railroad tracks; align the new steel pipe sleeve with the existing steel pipe sleeve and weld them together ensuring no cracks or gaps exist when finished. Furnish and install 2 each - 17 pound magnesium anodes, one installed at each end of the pipe with associated connection lugs.

The pipe extension shall be by a welder that is certified for welding pipeline materials.

Payment shall be by the unit bid price for each lineal foot of 18-inch diameter steel pipe sleeve extension with cathodic protection, furnished and installed, complete.

Bid Item B9. Furnish and install 10-inch, pvc, DR-18, C-900 waterline with spacers and endcaps in new/existing sleeve.

Includes all related earthwork; excavating trenches to the required depths; backfilling and compacting materials in trenches including pipe bedding and trench backfill; dewatering as required; furnishing and installing pvc, C-900, DR18 waterline piping, installing spacers, detectable wire and endcaps, installing location marking tape (Where applicable), installing fittings, (valves, tees, including fire hydrant tees, bends, sleeves, reducers, caps, plugs, thrust blocks, and restrained joint fittings not specified in other bid items), and accessories; pressure testing of new waterline; chlorinating, disinfecting, and flushing of the new waterline; and all other appurtenant work, complete.

- a. Excavated trench materials shall be required to be re-used as backfill if the materials meet specifications and approval by the Engineer. Includes locating utilities to determine conflicts and installing waterline to avoid said conflict.
- b. Includes all related costs to locate all utilities ahead of the construction and to provide for support of the utility, including power pole support, during the installation of the waterline.
- c. Protect railroad right of way fence and other adjoining fencing from

damage. Any damage done to the fencing will be repaired to the respective owners standards at the contractors expense.

Payment shall be by the unit bid price for each linear foot of waterline furnished and installed, complete.

Bid Item B10. Waterline connection at Sta 14+45.00 RT 5.65; Connect 10-inch PVC to existing PVC with appropriate fittings & bends.

Connect new 10-inch waterline to existing water line using two 10-inch 45° bends with mechanical restraints, thrust blocks, per the drawings and all other appurtenant fittings, complete.

Payment shall be by the unit bid price for each appropriate waterline connection.

Bid Item B11. Furnish 1-inch clean gravel pipe bedding.

Includes furnishing 1-inch clean gravel backfill for pipe bedding, as directed by the Engineer.

- a. Placement and compaction of gravel bedding materials for pipe shall be paid under the bid item, which utilizes bedding backfill materials, and not to be paid as part of this item.

Payment shall be by the unit price for each ton of gravel bedding material furnished only. Weight tickets must be submitted to the Engineer in order to document the tonnage.

Bid Item B12. Furnish trench backfill material.

Includes furnishing structural backfill material, as directed by the Engineer.

- a. Placement and compaction of structural backfill materials for pipeline trenches shall be paid under the bid item, which utilizes structural backfill materials, and not to be paid as part of this item.

Payment shall be by the unit price for each ton of structural backfill material furnished only. Weight tickets must be submitted to the Engineer in order to document the tonnage.

Bid Item B13. Adjust valve box ring and cover to finish grade.

Includes all related earthwork including excavation, backfilling, compacting, and grading; all tools, labor and materials required to adjust the valve box ring and

cover to finish grade; furnishing and installing roadbase course under concrete collar; furnishing and installing concrete collar (8-inch thick minimum) around the adjusted valve box ring and cover; and all appurtenant work, complete.

Concrete collar shall be kept $\frac{1}{4}$ " below the finish asphalt pavement.

Payment shall be by the unit bid price for each valve box ring and cover adjusted to finish grade, complete.

Bid Item B14. Remove and replace all landscaping improvements, public/private damaged during construction.

Includes all related earthwork; removing and disposing of unsuitable materials as required; furnishing, installing and grading the existing ground surface and/or all imported topsoil; fences, gates, signs and all landscaping items, replacing all damaged items; protecting, moving or relocation of all indicator signs as required; and all other appurtenant work, complete.

- a. This landscaping item is for regrading and matching existing ground cover as is. Contractor is responsible for all landscape replacement and coordination with the affected property owners, complete.

Payment shall be at a lump sum bid price for the removal and replacement of the landscaping improvements, complete.

Bid Item B15. Surveying/monitoring of railroad tracks.

Includes all related manpower and equipment necessary to survey the Union Pacific Railroad (UPRR) rails before work starts to provide an accurate elevation and alignment survey of the existing rails. Includes establishing a protected benchmark and surveying a minimum of 7 elevation and alignment points on each rail with one point over the waterline sleeve location and the other points evenly spaced over a distance of 15 feet north and 15 feet south of the existing sleeve centerline.

A "preconstruction base-line" survey shall be completed at least one week prior to the start of construction and shall include the points for the sleeve extension location.

The same location points must be surveyed, each working day, to verify elevation and alignment. The surveyor must be certified with Union Pacific Railroad (UPRR) to be on the tracks and within the railroad right-of-way.

The top of rail shall not deflect more than $\frac{1}{4}$ inch vertical or horizontal.

The Contractor shall adhere to all UPRR monitoring requirements as specified in

the contract documents. All survey documentation shall be submitted to UPRR as required and submitted to the Engineer daily.

Payment shall be by the unit bid price for each day required for the surveying/monitoring of the railroad tracks, complete.

END OF DOCUMENT