

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: June 21, 2016
Date of Addendum: June 14, 2016

| B.O. | Proposal ID | Proposal Work Type | County | Project Number | Addendum |
|-------------|--------------------|---------------------------|---------------|--|-----------------|
| 156 | 57-1187-783 | HMA SIDEWALK/TRAIL | LINN | EDP-1187(778)--7Y-57 TAP-U-1187(783)--8I-57 | 21JUN156.A01 |

Change Proposal Line No. 0010 2101-0850002 CLEARING AND GRUBBING:

From: 265.000 UNIT

To: 280.000 UNIT

Add Proposal Line No. 0255 2599-9999009 TREE PROTECTION FENCE; 5,500.000 LF

Add Proposal Line No. 0265 2599-9999010 TREE PROTECTION; 1.000 LUMP

If the above changes are not made, they will be made as shown here.

Make the following changes to the PROPOSAL PROVISIONS LIST AND TEXT:

Add the attached SP-157017

SPECIAL PROVISIONS
FOR
TREE PROTECTION

Linn County
EDP-1187(778)--7Y-57

Effective Date
June 21, 2016

Replace SHEET NUMBER C.02, C.03 and D.01
With the attached SHEET NUMBER C.02, C.03 and D.01

EDP-1187(778)--7Y-57

Replace SHEET C.02 TAP-U-1187(783)--8I-57
With the attached SHEET NUMBER C.02



**SPECIAL PROVISIONS
FOR
TREE PROTECTION**

**Linn County
EDP-1187(778)--7Y-57**

**Effective Date
June 21, 2016**

THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A.** Tree Protection Plan
- B.** Installation of Tree Protection Measures
- C.** Damage to Protected Trees
- D.** Inspection and Documentation

1.02 DEFINITION OF TERMS AND ABBREVIATIONS

Work Zone Protected Tree

A tree of any size that is located within the project's work zone and is to remain in place at the completion of the project.

Border Protected Tree

A tree of any size that is located outside the project's work zone, but has branches extending over the work area, or whose trunk is located within 10 feet of the edge of the work area.

Tree Protection Limit

The area around a tree, as defined in the Tree Protection Plan, in which no construction activity is allowed. If the tree protection limit is not defined in the Tree Protection Plan, it shall be considered to be equal to the Critical Root Radius.

dbh: Diameter at breast height

The diameter of a tree's trunk in inches measured at a height of 4.5 feet above the natural ground level.

CRR: Critical Root Radius

Expressed in feet equal to the dbh in inches (The CRR of a tree with a 12 inch dbh is 12 feet). This is the desired distance from the tree trunk at which fencing is installed and no construction activity is allowed.

1.03 DESCRIPTION OF WORK

- A. The Contractor shall not damage any trees and shrubs which are not part of the removal plan, regardless of whether installation of tree protection measures is required or not. The contract documents may designate individual trees and/or areas of the project that require installation of tree protection measures as defined in this specification.
- B. This Section includes the identification of trees, preparation of a Tree Protection Plan for the construction area, and the deduction of payment to the Contractor for damage to a tree.
- C. The Contractor shall install all tree protection measures before the commencement of any construction activities.

1.04 MEASUREMENT AND PAYMENT

- A. Tree Protection: Item will be paid for as a lump sum for the project. Item includes inventory, tree protection plan, documentation, inspection, and signing of work zone protected trees and border protected trees for the duration of the construction activity. The Engineer may make partial payments based upon estimates for the project completion.
- B. Tree Protection Fence: The number of linear feet of tree protection fence constructed will be determined by measuring along the fence at the bottom of the mesh fabric. The Contractor shall be paid the contract unit price for the number of linear feet of fence constructed and measured. This payment shall be full compensation for furnishing all materials, equipment, and labor to perform installation, maintenance, and removal of fencing. If other types of fence, such as silt fence, is installed and functions as tree protection fence, measurement and payment will not be made for this fence as tree protection fence.
- C. For each occurrence of tree protection fencing not installed as per the approved Tree Protection Plan or not properly maintained as described in Section 3.02A, the following shall be deducted from the amount due the Contractor: \$600 for the 1st occurrence, \$1200 for the 2nd occurrence, and \$1800 for the 3rd and subsequent occurrences. Fines shall be issued per daily, per tree, per occurrence.
- D. The condition of any tree damaged by the Contractor will be evaluated by the Municipal Arborist. The Contractor shall be required to repair damage to the tree as directed by the Municipal Arborist. This could include, but not be limited to trimming and pruning of the branches and roots in accordance with the current edition of the American National Standards Institute (ANSI) A300 Standards for Tree Care Operations, Part 1, Pruning. In addition to repairing the damage, an amount of \$1200 per tree shall be deducted from the amount due the Contractor for each tree damaged.
- E. When the Municipal Arborist determines the damaged tree needs to be removed, the contractor shall remove the tree and stump, and restore the sod area. Repair and removal of damaged trees shall be completed at no cost to the City. The Contractor shall also compensate the City for the mitigation cost of any damaged tree that is removed, in accordance with City ordinance. The Contractor shall also be liable to the owner of any tree located on private property that must be removed due to damage, for the full value of the tree. Documentation of such payment shall be provided to the City.

PART 2 – PRODUCTS

2.01 ORANGE MESH TREE PROTECTION FENCE

- A.** Fabric shall meet the following material requirements:
 1. Height of 48 inches +2 inches and constructed of orange plastic mesh containing ultraviolet stabilizers to prevent degradation.
 2. Remain flexible down to 0°F.
 3. Minimum tensile strength of 250 pounds per foot in the longitudinal direction and 150 pounds per foot in the vertical direction.
 4. Maximum aperture opening of a nominal 4.5 square inches.
 5. Maximum porosity of 55% for the safety fence surface area.
 6. Available in rolls of at least 50 feet in length to minimize fence joints for an individual fence location.
- B.** Fence posts shall meet the following requirements:
 1. Use T-section steel posts, 6 foot length.
 2. Equip posts with lugs or other approved means to prevent the fence fabric from moving vertically.
 3. Use posts that weigh no less than 1.3 pounds per foot, exclusive of anchor plate.
 4. Provide each post with a steel anchor plate of adequate size, firmly attached.

PART 3 – EXECUTION

3.01 TREE PROTECTION PLAN

- A.** The contractor shall submit a Tree Protection Plan to the Engineer prior to starting work. The plan shall include the following items:
 1. Work zone limits
 2. Location and size of trees to be removed
 3. Location and size (dbh) of work zone protected trees
 4. Location and size (dbh) of border protected trees
 5. Proposed location of tree protection measures
 6. Phasing of the tree protection installation, including phasing for utility work, if necessary
 7. Location, size (dbh), and description of trees with existing damage that are not designated to be removed
 8. Location and size (dbh) of dead trees that are not designated to be removed
 9. Location and description of proposed tree trimming to complete the required construction work
- B.** The Contractor may submit an alternate to the installation of tree protection fencing, such as the installation of silt fencing along border trees, if such alternates provide acceptable tree protection. The Engineer shall have the sole authority for acceptance or rejection of alternates. Alternate plans may also take into consideration preliminary brush removal.

3.02 INSTALLATION AND MAINTENANCE OF TREE PROTECTION MEASURES

After approval of the Tree Protection Plan by the Engineer, and prior to starting construction work, the contractor shall install the tree protection fencing or other approved measures in accordance with the Tree Protection Plan. Install fence posts at an 8 foot maximum spacing or as required to prevent sagging. Securely attach the fence so it is in a vertical position without sagging. Locate and place the fence supports so they are not a safety hazard. Clearly mark with paint the trees to be removed in accordance with the Tree Protection Plan. No construction activity can commence until the tree protection fencing measures and the trees marked for removal have been reviewed on site by the Engineer. Phasing of the installation of tree protection measures will only be allowed if shown on the

approved Tree Protection Plan. Repair or replace any tree protection fence that is damaged, not in a vertical position or no longer providing the intended protection.

3.03 DAMAGES TO TREES

Damage to a work zone protected tree, a border protected tree, or any other tree not designated for removal shall be determined by the Engineer or Municipal Arborist and shall include but not be limited to:

1. Scratched or gouged bark.
2. Broken branches.
3. Compaction of soil within the specified tree protection limits.
4. Storage of materials within a tree's critical root radius.
5. Operation of equipment within the specified tree protection limits.
6. Parking of vehicles or equipment within a tree's critical root radius.
7. Spilling of harmful substances around or within a tree's critical root radius.

3.04 INSPECTION AND DOCUMENTATION

- A. The Contractor shall periodically inspect the tree protection fencing, repair any deficiencies, and update the Tree Protection Plan. All updates shall be submitted to the Engineer for approval. Fencing shall be inspected daily, and the contractor shall specify who is inspecting the fence. A copy of the current Tree Protection Plan shall be available on the construction site.
- B. If any tree not designated for removal is damaged, the Contractor shall notify the Engineer with 48 hours.

| ESTIMATED PROJECT QUANTITIES | | | | |
|------------------------------|--------------|--|------|-------|
| Item No. | Item Code | Item | Unit | Total |
| 1 | 2101-0850002 | CLEARING AND GRUBBING | UNIT | 280 |
| 2 | 2102-2710070 | EXCAVATION, CLASS 10, ROADWAY AND BORROW | CY | 1050 |
| 3 | 2105-8425005 | TOPSOIL, FURNISH AND SPREAD | CY | 55 |
| 4 | 2105-8425015 | TOPSOIL, STRIP, SALVAGE AND SPREAD | CY | 365 |
| 5 | 2111-8174100 | GRANULAR SUBBASE | SY | 3035 |
| 6 | 2123-7450020 | SHOULDER FINISHING, EARTH | STA | 41.20 |
| 7 | 2213-6745500 | REMOVAL OF CURB | STA | 0.75 |
| 8 | 2431-0000100 | SEGMENTAL BLOCK RETAINING WALL | SF | 315 |
| 9 | 2435-0251224 | INTAKE, SW-512, 24 IN. | EACH | 1 |
| 10 | 2435-0700020 | CONNECTION TO EXISTING INTAKE | EACH | 1 |
| 11 | 2503-0114215 | STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 15 IN. | LF | 27 |
| 12 | 2511-0301400 | RECREATIONAL TRAIL, HOT MIX ASPHALT, 4 IN. | SY | 2600 |
| 13 | 2511-6745900 | REMOVAL OF SIDEWALK | SY | 25 |
| 14 | 2511-7526004 | SIDEWALK, P.C. CONCRETE, 4 IN. | SY | 180 |
| 15 | 2511-7526006 | SIDEWALK, P.C. CONCRETE, 6 IN. | SY | 80 |
| 16 | 2511-7528101 | DETECTABLE WARNINGS | SF | 86 |
| 17 | 2512-1725356 | CURB AND GUTTER, P.C. CONCRETE, 3.5 FT. | LF | 75 |
| 18 | 2524-6765010 | REMOVE AND REINSTALL SIGN AS PER PLAN | EACH | 1 |
| 19 | 2524-9276010 | PERFORATED SQUARE STEEL TUBE POSTS | LF | 168 |
| 20 | 2524-9325001 | TYPE A SIGNS, SHEET ALUMINUM | SF | 51 |
| 21 | 2526-8285000 | CONSTRUCTION SURVEY | LS | 1 |
| 22 | 2527-9263109 | PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED | STA | 6.30 |
| 23 | 2528-8445110 | TRAFFIC CONTROL | LS | 1 |
| 24 | 2533-4980005 | MOBILIZATION | LS | 1 |
| 25 | 2599-9999005 | BIKE RACKS | EACH | 13 |
| 26 | 2599-9999010 | RELOCATE IRRIGATION SYSTEM COMPONENTS | LS | 1 |
| 27 | 2601-2634100 | MULCHING | ACRE | 0.8 |
| 28 | 2601-2636044 | SEEDING AND FERTILIZING (URBAN) | ACRE | 0.8 |
| 29 | 2601-2642120 | STABILIZING CROP - SEEDING AND FERTILIZING (URBAN) | ACRE | 0.8 |
| 30 | 2602-0000020 | SILT FENCE | LF | 1275 |
| 31 | 2602-0000071 | REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS | LF | 1275 |
| 32 | 2602-0000101 | MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK | LF | 510 |
| 33 | 2602-0000306 | PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 6 IN. DIA. | LF | 60 |
| 34 | 2602-0010010 | MOBILIZATIONS, EROSION CONTROL | EACH | 3 |
| 35 | 2599-9999009 | TREE PROTECTION FENCE | LF | 5500 |
| 36 | 2599-9999010 | TREE PROTECTION | LS | 1 |

| ESTIMATE REFERENCE INFORMATION | | | |
|--------------------------------|--------------|--|--|
| Item No. | Item Code | Item | Description |
| 1 | 2101-0850002 | CLEARING AND GRUBBING | See Table on Sheet C.03 for tree removals. Trimming shall be to 10' vertical clearance and 2' horizontal clearance from the edge of the trail. Tree felling shall meet current DOT specifications. |
| 2 | 2102-2710070 | EXCAVATION, CLASS 10, ROADWAY AND BORROW | Overhaul shall not be measured or paid, but shall be incidental to the project. Volume includes additional 30% to Fill Volumes for compaction. Earthwork quantities are estimated as follows: Black Dirt = 365 CY; Cut = 1050 CY; Fill+30% = 650 CY |
| 3 | 2105-8425005 | TOPSOIL, FURNISH AND SPREAD | Quantity is 15% topsoil amendment to 2105-8425015 (TOPSOIL, STRIP, SALVAGE AND SPREAD). Placement is not shown on the plans and shall be as directed by Engineer. Measurement shall be plan quantity. Payment shall be unit price and shall include overhaul, placement, spreading to plan grade, and all labor and machine costs to furnish and spread. |
| 4 | 2105-8425015 | TOPSOIL, STRIP, SALVAGE AND SPREAD | Quantity is area bounded by grading limits with pavement area subtracted. Assumed 4-inch depth. |
| 5 | 2111-8174100 | GRANULAR SUBBASE | Width extends 1' beyond edge of pavement, see Typical Sections. Depth of granular subbase is 6". |
| 6 | 2123-7450020 | SHOULDER FINISHING, EARTH | Quantity is measured at outside edge of shoulder. Material is included in 2102-2710070. |
| 7 | 2213-6745500 | REMOVAL OF CURB | This item is for the curb removal associated with the proposed ramps at the intersection of H Avenue NE and Maplewood Drive NE. Thickness of existing pavement is 8". |
| 8 | 2431-0000100 | SEGMENTAL BLOCK RETAINING WALL | See U Sheets. |
| 9 | 2435-0251224 | INTAKE, SW-512, 24 IN. | See Sheet D.02. |
| 10 | 2435-0700020 | CONNECTION TO EXISTING INTAKE | See Sheet D.02. |
| 11 | 2503-0114215 | STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 15 IN. | See Sheet D.02. |
| 12 | 2511-0301400 | RECREATIONAL TRAIL, HOT MIX ASPHALT, 4 IN. | Certified plant inspection is incidental to this item. |
| 13 | 2511-6745900 | REMOVAL OF SIDEWALK | See Table on Sheet C.03. Thickness of existing sidewalk is 4". |
| 14 | 2511-7526004 | SIDEWALK, P.C. CONCRETE, 4 IN. | See Table on Sheet C.03. Concrete pads for the bike racks are included in this item. Certified plant inspection is incidental to this item. |
| 15 | 2511-7526006 | SIDEWALK, P.C. CONCRETE, 6 IN. | See Table on Sheet C.03. Certified plant inspection is incidental to this item. |
| 16 | 2511-7528101 | DETECTABLE WARNINGS | See Table on Sheet C.03. Detectable warning panels shall be "Armor-Tile" brand red fiberglass inserts. |
| 17 | 2512-1725356 | CURB AND GUTTER, P.C. CONCRETE, 3.5 FT. | This item is for the curb replacement associated with the proposed ramps at the intersection of H Avenue NE and Maplewood Drive NE. Certified plant inspection is incidental to this item. |
| 18 | 2524-6765010 | REMOVE AND REINSTALL SIGN AS PER PLAN | See Sheet P.02. |
| 19 | 2524-9276010 | PERFORATED SQUARE STEEL TUBE POSTS | See Table on Sheet C.03. See P Sheets. |
| 20 | 2524-9325001 | TYPE A SIGNS, SHEET ALUMINUM | See Table on Sheet C.03. See P Sheets. |
| 21 | 2526-8285000 | CONSTRUCTION SURVEY | |
| 22 | 2527-9263109 | PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED | See Table on Sheet C.03. See P Sheets. |
| 23 | 2528-8445110 | TRAFFIC CONTROL | |
| 24 | 2533-4980005 | MOBILIZATION | |
| 25 | 2599-9999005 | BIKE RACKS | See K Sheets. Bike racks shall be 2.375 inch galvanized "Saris Inverted U Bike Dock" or equivalent. Payment is each for all material and labor for complete installation. |
| 26 | 2599-9999010 | RELOCATE IRRIGATION SYSTEM COMPONENTS | Payment is lump sum for all material, labor, and equipment required to relocate irrigation valve and backflow prevention system at STA 603+65. See Sheet D.02. |
| 27 | 2601-2634100 | MULCHING | Quantity is area bounded by grading limits with pavement area subtracted. |
| 28 | 2601-2636044 | SEEDING AND FERTILIZING (URBAN) | Quantity is area bounded by grading limits with pavement area subtracted. See special provisions for special requirements and specifications. |
| 29 | 2601-2642120 | STABILIZING CROP - SEEDING AND FERTILIZING (URBAN) | Quantity is area bounded by grading limits with pavement area subtracted. |
| 30 | 2602-0000020 | SILT FENCE | See D Sheets. |
| 31 | 2602-0000071 | REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS | See D Sheets. |
| 32 | 2602-0000101 | MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK | Contractor shall clean out silt fence once 50% of the available capacity is reduced. Anticipate 40% of length of silt fence installed. |
| 33 | 2602-0000306 | PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 6 IN. DIA. | This item is for filter socks at storm sewer structures. See D Sheets. |
| 34 | 2602-0010010 | MOBILIZATIONS, EROSION CONTROL | |
| 35 | 2599-9999009 | TREE PROTECTION FENCE | See Special Provision #SP-157017. |
| 36 | 2599-9999010 | TREE PROTECTION | See Special Provision #SP-157017. |

REVISIONS:

1 ADDENDUM NO. 1

T: \\ACAD\209040--Phase 1\Sheets\2015\Phase 1B\C_Phase_1B.dwg 6--13--16 08:35:42 AM Admin

Item Code
2101-0850002

CLEARING AND GRUBBING

| Location | | Work and Material Type | Trees, Stumps, Logs, and Down Timber Material Diameters | | | | | | | | | | | | | Calculated Units | Remarks |
|-----------------------------------|------------------------|------------------------|---|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|------------------|---|
| Station & Offset | Reference Alignment | | 3"-6" | >6"-9" | >9"-12" | >12"-15" | >15"-18" | >18"-24" | >24"-30" | >30"-36" | >36"-42" | >42"-48" | >48"-60" | >60"-72" | >72" | | |
| 601+19, 8.6' L | CEMAR Trail (Phase 1B) | Clearing and Grubbing | | | | | 1 | | | | | | | | | 13.5 | Pine Tree |
| 601+41, 3.8' L | CEMAR Trail (Phase 1B) | Clearing and Grubbing | | | | | 1 | | | | | | | | | 13.5 | Pine Tree |
| 601+88, 7.5' L | CEMAR Trail (Phase 1B) | Clearing and Grubbing | | | | | 1 | | | | | | | | | 13.5 | Pine Tree |
| 602+16, 3.9' R | CEMAR Trail (Phase 1B) | Clearing and Grubbing | | | | | | | 1 | | | | | | | 29.0 | Deciduous, exact species unknown |
| 603+13, 1.5' R | CEMAR Trail (Phase 1B) | Clearing and Grubbing | 1 | | | | | | | | | | | | | 1.6 | Bush |
| 603+23, 1.2' R | CEMAR Trail (Phase 1B) | Clearing and Grubbing | 1 | | | | | | | | | | | | | 1.6 | Bush |
| 900+19 to 900+50 | Daniels Park Trail | Clearing and Grubbing | 20 | | | | | | | | | | | | | 32.0 | Bushes |
| 900+73, 7.6' R | Daniels Park Trail | Clearing and Grubbing | | | | | 1 | | | | | | | | | 13.5 | Deciduous, exact species unknown |
| 903+19, 6.3' R | Daniels Park Trail | Clearing and Grubbing | | 2 | | | | | | | | | | | | 7.8 | Deciduous, exact species unknown (twin) |
| 904+36, 5.7' R | Daniels Park Trail | Clearing and Grubbing | 1 | | | | | | | | | | | | | 1.6 | Deciduous, exact species unknown |
| 905+09, 6.4' L | Daniels Park Trail | Clearing and Grubbing | 1 | | | | | | | | | | | | | 1.6 | Deciduous, exact species unknown |
| 908+11, 2.3' L | Daniels Park Trail | Clearing and Grubbing | | | | | 1 | | | | | | | | | 13.5 | Deciduous, exact species unknown |
| 909+48 to 909+99 | Daniels Park Trail | Clearing and Grubbing | | | 6 | | | | | | | | | | | 40.2 | Bushes |
| 909+90, 21.6' L | Daniels Park Trail | Clearing and Grubbing | | | | | 2 | | | | | | | | | 27.0 | Pine Tree (twin) |
| 910+12, 23.1' L | Daniels Park Trail | Clearing and Grubbing | | | | | | 1 | | | | | | | | 22.0 | Pine Tree |
| 910+90, 13.5' L | Daniels Park Trail | Clearing and Grubbing | | | | | | | 1 | | | | | | | 29.0 | Pine Tree |
| 913+88, 0.7' R | Daniels Park Trail | Clearing and Grubbing | | | 1 | | | | | | | | | | | 6.7 | Deciduous, exact species unknown |
| 914+50, 4.7' R | Daniels Park Trail | Clearing and Grubbing | | | | 1 | | | | | | | | | | 9.4 | Deciduous, exact species unknown |
| Unit Weight | | | 1.6 | 3.9 | 6.7 | 9.4 | 13.5 | 22 | 29 | 50 | 80 | 120 | 160 | 200 | 280 | 277.0 | |
| Totals Removals for Each Diameter | | | 24 | 2 | 7 | 1 | 6 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | | |

ITEM CODE
2511-6745900

REMOVAL OF SIDEWALK

| STATION TO STATION | | Pavement Type | AREA Sq. Yds. | REMARKS |
|--------------------|--------|---------------|------------------|---|
| 607+39 | 607+54 | PCC, 4" | 11.78 | Ramp replacement on south side of H Avenue NE |
| 607+49 | 607+64 | PCC, 4" | 10.00 | Ramp replacement on north side of H Avenue NE |
| Total | | | 25 | |

Item Code
2511-7526004, 2511-7526006, 2511-7528101

SIDEWALKS

| Alignment Identification | Station to Station | | 4" PCC Sidewalk SY | 6" PCC Sidewalk SY | Detectable Warnings SF | Remarks |
|--------------------------|--------------------|--------|--------------------------|--------------------------|------------------------------|--------------------------------|
| | | | Side | | | |
| CEMAR Trail (Phase 1B) | 600+18 | 600+97 | L | 54.2 | | 6' wide sidewalk along H Ave |
| | 600+76 | 601+09 | B | | 29.6 | Bicycle slip ramp |
| | 606+94 | 607+15 | B | | 24.5 | NW corner of H Ave & Maplewood |
| | 607+45 | 607+59 | R | 5.4 | 6.6 | SE corner of H Ave & Maplewood |
| | 607+41 | 607+65 | B | 10.0 | 13.7 | NE corner of H Ave & Maplewood |
| Daniels Park Trail | 903+24 | 903+42 | L | 24.0 | | Bike rack pad |
| | 903+92 | 904+10 | L | 22.7 | | Bike rack pad |
| | 907+33 | 907+50 | R | 39.4 | 24.0 | 6' wide sidewalk at I Ave |
| Parking Lot Spur | 1000+42 | 100+58 | R | 14.2 | | Bike rack pad |
| TOTAL | | | | 180 | 80 | 86 |

Item Code:
2524-9276010, 2524-9325001

SIGNS AND POSTS

| Station | Offset | Classification | | | | | | | | | | Post Length |
|-------------|--------|----------------|------|-------|--------|-------|-------|-------|-------|-------|---------|--------------------------|
| | | R1-1 | R1-2 | R5-3 | D11-1a | D11-2 | M5-2L | M6-2L | M6-2R | W11-2 | W16-7pL | |
| 600+79 | R | | 1 | | | | | | | | | 12 |
| 600+91 | R | | | | 1 | | | 1 | | | | 12 |
| 601+09 | L | | | | | 1 | | | 1 | | | 12 |
| 601+59 | L | | | | 1 | | 1 | | | | | 12 |
| 606+98 | L | | | 1 | | | | | | | | 12 |
| 606+99 | R | 1 | | | | | | | | | | 12 |
| 905+53 | R | | | | | | | | | 1 | | 15 |
| 907+31 | R | | | | | | | | | 1 | 1 | 15 |
| 907+49 | R | | | | | | | | | 1 | 1 | 15 |
| 909+51 | R | | | | | | | | | 1 | | 15 |
| 914+77 | L | | | 1 | | | | | | | | 12 |
| 914+77 | R | 1 | | | | | | | | | | 12 |
| 1000+56 | L | | | 1 | | | | | | | | 12 |
| SUBTOTAL | | 2 | 1 | 3 | 2 | 1 | 1 | 1 | 1 | 4 | 2 | TOTAL (LF) 168 |
| x AREA (SF) | | 1.75 | 1.00 | 4.00 | 2.25 | 2.25 | 0.75 | 0.75 | 0.75 | 6.25 | 2.00 | |
| TOTAL (SF) | | 3.50 | 1.00 | 12.00 | 4.50 | 2.25 | 0.75 | 0.75 | 0.75 | 25.00 | 4.00 | |

Item Code:
2527-9263109

PAINTED PAVEMENT MARKINGS

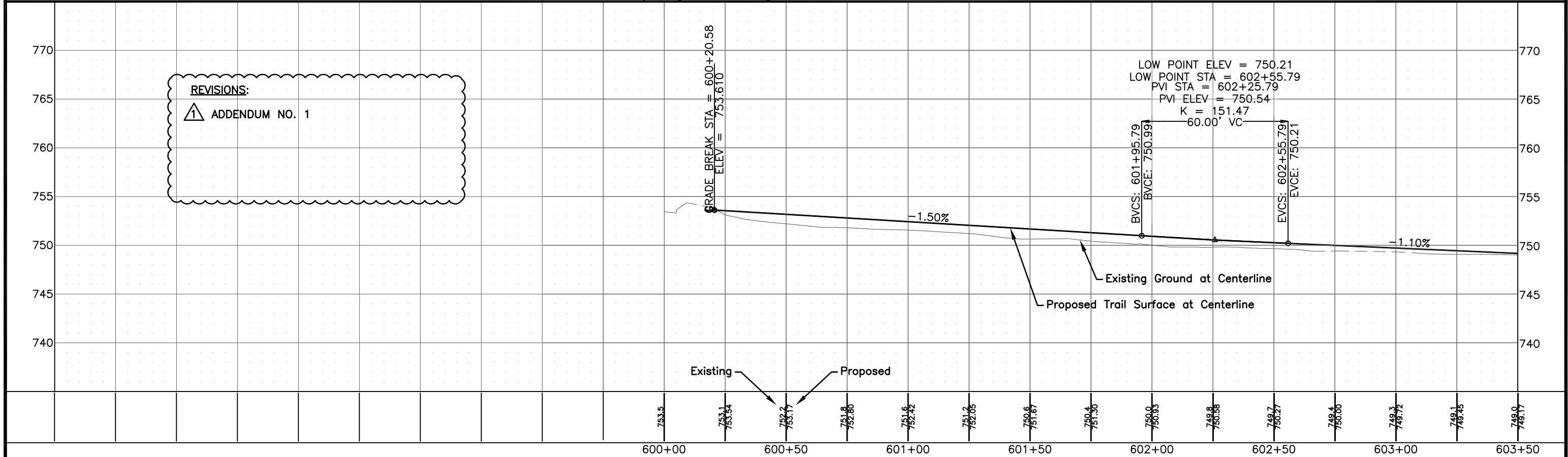
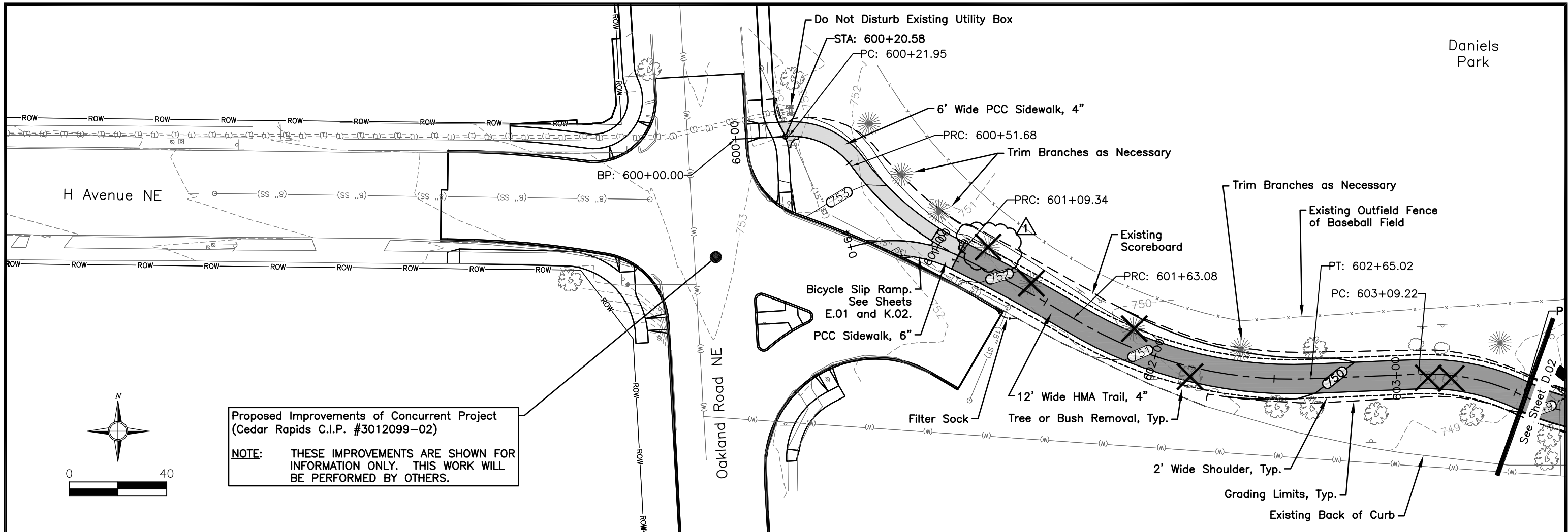
| 1 = 30" Crosswalk Bar | | | | | | |
|--------------------------|--------------------|------|----------------------|--|--|--|
| Location | | | Length (In Stations) | | | |
| Alignment Identification | Station to Station | Side | 1 | | | |
| Daniels Park Trail | 907+42 | R | 0.24 | | | |
| Daniels Park Trail | 915+85 915+10 | | 0.60 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Length Subtotals | | | 0.84 | | | |
| Quantity Factors | | | 7.50 | | | Based on 4" continuous stripe equivalent |
| TOTAL | | | 6.30 | | | |

REVISIONS:

1 ADDENDUM NO. 1

| SIGN DESCRIPTIONS | | | |
|-------------------|--------------------------------------|-------------|-----------|
| CLASSIFICATION | TYPE | SIZE | AREA (SF) |
| R1-1 | Stop Sign | 18"x18" | 1.75 |
| R1-2 | Yield | 18"x18"x18" | 1.00 |
| R5-3 | No Motorized Vehicles | 24"x24" | 4.00 |
| D11-1a | Bicycle Guide | 18"x18" | 2.25 |
| D11-2 | Pedestrian Guide | 18"x18" | 2.25 |
| M5-2L | Advanced Turn Arrow Auxiliary (Left) | 12"x9" | 0.75 |
| M6-2L | Directional Arrow Auxiliary (Left) | 12"x9" | 0.75 |
| M6-2R | Directional Arrow Auxiliary (Right) | 12"x9" | 0.75 |
| W11-2 | Pedestrian | 30"x30" | 6.25 |
| W16-7pL | Downward Diagonal Arrow (Left) | 24"x12" | 2.00 |

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| ESTIMATED PROJECT QUANTITIES | | | | |
|------------------------------|--------------|--|------|-------|
| Item No. | Item Code | Item | Unit | Total |
| 1 | 2101-0850001 | CLEARING AND GRUBBING | ACRE | 2.0 |
| 2 | 2102-2710070 | EXCAVATION, CLASS 10, ROADWAY AND BORROW | CY | 2100 |
| 3 | 2105-8425005 | TOPSOIL, FURNISH AND SPREAD | CY | 185 |
| 4 | 2105-8425015 | TOPSOIL, STRIP, SALVAGE AND SPREAD | CY | 1220 |
| 5 | 2111-8174100 | GRANULAR SUBBASE | SY | 7100 |
| 6 | 2123-7450020 | SHOULDER FINISHING, EARTH | STA | 71.00 |
| 7 | 2213-6745500 | REMOVAL OF CURB | STA | 2.35 |
| 8 | 2301-1032070 | PCC PAVEMENT, CLASS C, CLASS 2 DURABILITY, 7 IN. | SY | 755 |
| 9 | 2315-8275025 | SURFACING, DRIVEWAY, CLASS A CRUSHED STONE | TON | 120 |
| 10 | 2435-0140160 | MANHOLE, STORM SEWER, SW-401, 60 IN. | EACH | 1 |
| 11 | 2435-0250248 | INTAKE, SW-502, 48 IN. | EACH | 1 |
| 12 | 2435-0251224 | INTAKE, SW-512, 24 IN. | EACH | 2 |
| 13 | 2435-0251300 | INTAKE, SW-513 | EACH | 1 |
| 14 | 2435-0600010 | MANHOLE ADJUSTMENT, MINOR | EACH | 1 |
| 15 | 2435-0600110 | INTAKE ADJUSTMENT, MINOR | EACH | 1 |
| 16 | 2502-8212206 | SUBDRAIN, PERFORATED PLASTIC PIPE, 6 IN. DIA. | LF | 505 |
| 17 | 2503-0114215 | STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 15 IN. | LF | 185 |
| 18 | 2511-0301400 | RECREATIONAL TRAIL, HOT MIX ASPHALT, 4 IN. | SY | 4880 |
| 19 | 2511-0302600 | RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN. | SY | 140 |
| 20 | 2511-6745900 | REMOVAL OF SIDEWALK | SY | 130 |
| 21 | 2511-7526004 | SIDEWALK, P.C. CONCRETE, 4 IN. | SY | 55 |
| 22 | 2511-7526006 | SIDEWALK, P.C. CONCRETE, 6 IN. | SY | 280 |
| 23 | 2511-7528101 | DETECTABLE WARNINGS | SF | 246 |
| 24 | 2512-1725156 | CURB AND GUTTER, P.C. CONCRETE, 1.5 FT. | LF | 140 |
| 25 | 2512-1725256 | CURB AND GUTTER, P.C. CONCRETE, 2.5 FT. | LF | 95 |
| 26 | 2515-2475007 | DRIVEWAY, P.C. CONCRETE, 7 IN. | SY | 90 |
| 27 | 2524-6765010 | REMOVE AND REINSTALL SIGN AS PER PLAN | EACH | 2 |
| 28 | 2524-6765110 | REMOVAL OF TYPE A SIGN | EACH | 2 |
| 29 | 2524-6765210 | REMOVAL OF TYPE A SIGN ASSEMBLY | EACH | 1 |
| 30 | 2524-9276010 | PERFORATED SQUARE STEEL TUBE POSTS | LF | 315 |
| 31 | 2524-9325001 | TYPE A SIGNS, SHEET ALUMINUM | SF | 100 |
| 32 | 2526-8285000 | CONSTRUCTION SURVEY | LS | 1 |
| 33 | 2527-9263109 | PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED | STA | 2.53 |
| 34 | 2527-9263126 | PERMANENT TAPE MARKINGS, PROFILED PAVEMENT MARKING TAPE | STA | 22.05 |
| 35 | 2527-9270111 | GROOVES CUT FOR PAVEMENT MARKINGS | STA | 22.05 |
| 36 | 2528-8445110 | TRAFFIC CONTROL | LS | 1 |
| 37 | 2533-4980005 | MOBILIZATION | LS | 1 |
| 38 | 2595-7400200 | REMOVAL OF RAILROAD TRACK | TLF | 1600 |
| 39 | 2599-9999005 | CONNECTION TO EXISTING BOX CULVERT | EACH | 2 |
| 40 | 2599-9999005 | SUBDRAIN CLEANOUT | EACH | 4 |
| 41 | 2601-2634100 | MULCHING | ACRE | 2.3 |
| 42 | 2601-2636044 | SEEDING AND FERTILIZING (URBAN) | ACRE | 2.3 |
| 43 | 2601-2642120 | STABILIZING CROP - SEEDING AND FERTILIZING (URBAN) | ACRE | 2.3 |
| 44 | 2602-0000309 | PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN. DIA. | LF | 1665 |
| 45 | 2602-0010010 | MOBILIZATIONS, EROSION CONTROL | EACH | 3 |

| ESTIMATE REFERENCE INFORMATION | | | |
|--------------------------------|--------------|--|---|
| Item No. | Item Code | Item | Description |
| 1 | 2101-0850001 | CLEARING AND GRUBBING | Clearing and Grubbing shall be plan quantity. No measurement shall be made. Quantity is area bounded by grading limits for stations 800+82 to 806+15 and 831+41 to 839+01. Clearing and Grubbing shall meet current DOT specifications. |
| 2 | 2102-2710070 | EXCAVATION, CLASS 10, ROADWAY AND BORROW | Overhaul shall not be measured or paid, but shall be incidental to the project. Volume includes additional 30% to Fill Volumes for compaction. Earthwork quantities are estimated as follows: Black Dirt = 1220 CY; Cut = 2100 CY; Fill+30% = 390 CY |
| 3 | 2105-8425005 | TOPSOIL, FURNISH AND SPREAD | Quantity is 15% topsoil amendment to 2105-8425015 (TOPSOIL, STRIP, SALVAGE AND SPREAD). Placement is not shown on the plans and shall be as directed by Engineer. Measurement shall be plan quantity. Payment shall be unit price and shall include overhaul, placement, spreading to plan grade, and all labor and machine costs to furnish and spread. |
| 4 | 2105-8425015 | TOPSOIL, STRIP, SALVAGE AND SPREAD | Quantity is area bounded by grading limits with pavement area subtracted for stations 800+82 to 806+15 and 831+41 to 839+01, plus the area to the right side of the trail for stations 807+55 to 831+41. Assumed 4-inch depth. |
| 5 | 2111-8174100 | GRANULAR SUBBASE | Area includes 14' width along entire length of trail, plus area beneath sidewalk ramps, the driveway on F Avenue, and the parking lot on K Avenue. Depth of granular subbase is 6". |
| 6 | 2123-7450020 | SHOULDER FINISHING, EARTH | Quantity is measured at outside edge of shoulder. Material is included in 2102-2710070. |
| 7 | 2213-6745500 | REMOVAL OF CURB | This item is for the curb removal associated with the proposed sidewalk ramps on F Avenue at 16th Street and 17th Street, as well as the removal of the low profile curb on F Avenue. Thickness of existing pavement is 8". |
| 8 | 2301-1032070 | PCC PAVEMENT, CLASS C, CLASS 2 DURABILITY, 7 IN. | This item is for the paved parking lot on K Avenue. See Sheets D.07 and K.02. Certified plant inspection is incidental to this item. |
| 9 | 2315-8275025 | SURFACING, DRIVEWAY, CLASS A CRUSHED STONE | This item is for the granular surfacing between the existing pavement and the proposed driveway on F Avenue. See Sheets D.01 and K.01. Assumed 8" depth. |
| 10 | 2435-0140160 | MANHOLE, STORM SEWER, SW-401, 60 IN. | See Sheet M.05. |
| 11 | 2435-0250248 | INTAKE, SW-502, 48 IN. | See Sheets M.08 and M.09. |
| 12 | 2435-0251224 | INTAKE, SW-512, 24 IN. | See Sheets M.02 and M.08. |
| 13 | 2435-0251300 | INTAKE, SW-513 | See Sheet M.01. |
| 14 | 2435-0600010 | MANHOLE ADJUSTMENT, MINOR | This item is for the adjustment of an existing sanitary sewer manhole located beneath a proposed sidewalk ramp. The adjustment will consist of rotating the existing cone section. See Sheet S.03. |
| 15 | 2435-0600110 | INTAKE ADJUSTMENT, MINOR | This item is for the adjustment of an existing area intake at station 812+70. The adjustment will consist of raising the grate by adding adjustment rings. See Sheet M.03. |
| 16 | 2502-8212206 | SUBDRAIN, PERFORATED PLASTIC PIPE, 6 IN. DIA. | See Table on Sheet C.03. See M Sheets for plan and profile. See Sheet U.01 for details. Trenching, engineering fabric, and pourus backfill are incidental to this item. |
| 17 | 2503-0114215 | STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 15 IN. | See Sheets M.02, M.08, and M.09. |
| 18 | 2511-0301400 | RECREATIONAL TRAIL, HOT MIX ASPHALT, 4 IN. | See B and D Sheets. Certified plant inspection is incidental to this item. |
| 19 | 2511-0302600 | RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN. | See B and D Sheets. Certified plant inspection is incidental to this item. |
| 20 | 2511-6745900 | REMOVAL OF SIDEWALK | See Table on Sheet C.03. Thickness of existing sidewalk is 4". |
| 21 | 2511-7526004 | SIDEWALK, P.C. CONCRETE, 4 IN. | See Table on Sheet C.03. Certified plant inspection is incidental to this item. |
| 22 | 2511-7526006 | SIDEWALK, P.C. CONCRETE, 6 IN. | See Table on Sheet C.03. Certified plant inspection is incidental to this item. |
| 23 | 2511-7528101 | DETECTABLE WARNINGS | See Table on Sheet C.03. Detectable warning panels shall be "Armor-Tile" brand red fiberglass inserts. |
| 24 | 2512-1725156 | CURB AND GUTTER, P.C. CONCRETE, 1.5 FT. | The item is for the curb replacement at the driveway on F Avenue. See Sheets D.01 and K.01. Certified plant inspection is incidental to this item. |
| 25 | 2512-1725256 | CURB AND GUTTER, P.C. CONCRETE, 2.5 FT. | This item is for the curb replacement associated with the proposed ramps on F Avenue and 16th Street and 17th Street. See Sheets D.01 and D.02. Certified plant inspection is incidental to this item. |
| 26 | 2515-2475007 | DRIVEWAY, P.C. CONCRETE, 7 IN. | This item is for the proposed driveway on F Avenue. See Sheets D.01 and K.01. Certified plant inspection is incidental to this item. |
| 27 | 2524-6765010 | REMOVE AND REINSTALL SIGN AS PER PLAN | See P Sheets. |
| 28 | 2524-6765110 | REMOVAL OF TYPE A SIGN | See P Sheets. |
| 29 | 2524-6765210 | REMOVAL OF TYPE A SIGN ASSEMBLY | See P Sheets. |
| 30 | 2524-9276010 | PERFORATED SQUARE STEEL TUBE POSTS | See Table on Sheet C.03. See P Sheets. |
| 31 | 2524-9325001 | TYPE A SIGNS, SHEET ALUMINUM | See Table on Sheet C.03. See P Sheets. |
| 32 | 2526-8285000 | CONSTRUCTION SURVEY | |
| 33 | 2527-9263109 | PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED | See Table on Sheet C.03. See P Sheets. |
| 34 | 2527-9263126 | PERMANENT TAPE MARKINGS, PROFILED PAVEMENT MARKING TAPE | See Table on Sheet C.03. See P Sheets. |
| 35 | 2527-9270111 | GROOVES CUT FOR PAVEMENT MARKINGS | See Table on Sheet C.03. See P Sheets. See Sheet U.01 for detail. |
| 36 | 2528-8445110 | TRAFFIC CONTROL | |
| 37 | 2533-4980005 | MOBILIZATION | Includes coordination with the athletic complex site contractor. |
| 38 | 2595-7400200 | REMOVAL OF RAILROAD TRACK | Item includes removal of existing rail, ties, ballast or other track components in the construction area of the proposed trail. Removed items become the property of the contractor and shall be disposed of properly. Method of Measurement shall be Track-Lineal-Foot per plan. No measurement shall be made. Basis of Payment shall be per contract unit price and shall include the removal of all track components, restoration of grade, proper disposal of all removed materials, and all labor and machine time required to remove the railroad track. See Sheets D.01 and D.07 for locations of abandoned railroad tracks. |
| 39 | 2599-9999005 | CONNECTION TO EXISTING BOX CULVERT | See Sheets M.02 and M.09. Measurement shall be on a count basis, payment shall be for each connection and shall include supplying and installing all materials shown in the detail on Sheet U.01, and all other equipment, materials, and labor necessary. |
| 40 | 2599-9999005 | SUBDRAIN CLEANOUT | See Sheets M.02, M.04, and M.05. Measurement shall be on a count basis, payment shall be for each subdrain cleanout installed and shall include supplying and installing all materials shown in the detail on Sheet U.01, and all other equipment, materials, and labor necessary. |
| 41 | 2601-2634100 | MULCHING | Quantity is the area described in Item No. 4. |
| 42 | 2601-2636044 | SEEDING AND FERTILIZING (URBAN) | Quantity is the area described in Item No. 4. |
| 43 | 2601-2642120 | STABILIZING CROP - SEEDING AND FERTILIZING (URBAN) | Quantity is the area described in Item No. 4. See special provisions for special requirements and specifications. |
| 44 | 2602-0000309 | PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN. DIA. | See D Sheets. Contractor is responsible for SWPP and erosion control for stations 800+82 to 806+15 and 831+41 to 839+01. |
| 45 | 2602-0010010 | MOBILIZATIONS, EROSION CONTROL | |