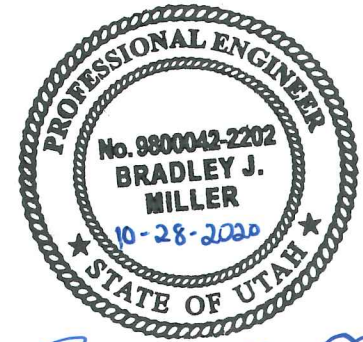


DOCUMENT 00 90 20
ADDENDUM No. 2



Bradley J. Miller

PART 1 GENERAL

1.1 DOCUMENT INCLUDES

A. Changes to the Bid Documents.

1.2 CONSTRUCTION CONTRACT

- A. The Construction Contract is known as WU015 – Mountain Road Water Line
- B. Date of this Addendum: October 28, 2020

PART 2 CHANGES

2.1 CHANGES TO PRIOR ADDENDA

A. None

2.2 CHANGES TO BIDDING REQUIREMENTS

- A. New Bid Schedule 00 41 10 – BID SCHEDULE No. 1, updated Measurement & Payment to reflect additional mobilization for paving operations. Payment for Bid Item No. 121 *Asphalt "T" Patch (½" Asphalt, 5" Thick)* shall include all labor, transportation, materials, and equipment required to patch back the water line trench within two weeks after a segment of water line is fully commissioned.
- B. Updated Measurement & Payment for Item 103 *Quality Control and Testing*.

2.3 CHANGES TO SPECIFICATIONS

A. None

2.4 CHANGE TO DRAWINGS

A. Sheet DT1 (Page 15)

2.5 CLARIFICATIONS

A. Paving will require multiple mobilizations. While the 2" overlay may be performed all at once at the end of the project, the patching will be different. It is expected that after a segment of water line is fully commissioned, it will be patched back within two weeks. Please prepare your bids to satisfy this requirement.

Water line segments are defined as follows:

1. Mountain Road – SR-39 to 1250 South
2. 1250 South in its entirety
3. Mountain Road 1250 South to STA 23+27.74, STA 24+50 to Sunview Dr
4. Mountain Road - Sunview Dr through 9th Street.

- B. Non-locking grates are acceptable for the Dipstone reconstruct item. Grates shall be galvanized, bicycle-safe, and have a minimum HS-20 traffic rating. Frames shall be cast/formed in the concrete as it is poured (Refer to updated Sheet DT1).

END OF SECTION

DOCUMENT 00 41 10

BID SCHEDULE

PART 1 GENERAL

1.1 DOCUMENT INCLUDES

- A. Bid schedules.
- B. Measurement and payment provisions.

1.2 CONSTRUCTION CONTRACT

- A. The Construction Contract is known as:
WU015 - Mountain Road Water Line

1.3 REFERENCES

- A. APWA 01 29 00: Payment Procedures.
- B. Document 00 50 00: Agreement.

PART 2 BID SCHEDULES

2.1 BASE BID

- A. Bid Schedules 1 & 2 below describe work basic to the Contract.

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BID SCHEDULE No. 1

Mountain Rd - Canyon to 9th, WU015 - Mountain Road Water Line

BID ITEM	DESCRIPTION	BID UNIT	BID QUANTITY	UNIT PRICE	CONTRACT AMOUNT
101	MOBILIZATION	LS	1		
102	TRAFFIC CONTROL	LS	1		
103	QUALITY CONTROL TESTING	LS	1		
104	SWPP PLAN	LS	1		
105	CONSTRUCTION STAKING AND SURVEYING	LS	1		
106	UTILITY INVESTIGATION	HR	20		
107	ROADWAY EXCAVATION (PLAN QUANTITY)	SY	670		
108	REMOVE & REPLACE CURB AND GUTTER	LF	700		
109	REMOVE & REPLACE CONCRETE SIDEWALK 4" THICK (4" THICK BASE)	SF	425		
110	REMOVE & REPLACE CONCRETE FLATWORK 6" THICK (6" THICK BASE)	SF	1050		
111	DETECTABLE WARNING SURFACE	EA	5		
112	6" CONCRETE CURBING (UP TO 12" TALL)	LF	40		
113	REMOVE CONCRETE WATERWAY	SF	480		
114	REMOVE & REPLACE CONCRETE WATERWAY	SF	820		
115	REMOVE ASPHALT PAVEMENT	SY	9065		
116	REMOVE FIRE HYDRANT	EA	5		
117	REMOVE WATER VALVE BOX	EA	13		
118	REMOVE WATER VALVE	EA	2		
119	EXISTING STRUCTURE - ADJUST TO GRADE	EA	23		
120	APWA SPEC ROADBASE (1" MINUS, 8" THICK)	TN	3410		
121	ASPHALT "T" PATCH (1/2" ASPHALT, 5" THICK)	TN	2200		
122	2" OVERLAY (1/2" HMA, PG 58-28)	TN	1400		
123	8" PVC C900 DR-18 PIPE	LF	1425		
124	8" GATE VALVE (CLASS 250)	EA	14		
125	12" PVC C900 DR-18 PIPE	LF	3120		
126	12" BUTTERFLY VALVE (CLASS 250)	EA	14		
127	WATER LINE CONNECTION	EA	13		
128	INSTALL NEW FIRE HYDRANT ASSEMBLY	EA	12		
129	1" AWWA C901 SERVICE LATERAL	LF	2000		
130	1" WATER SERVICE TO 1255 MTN RD	LS	1		
131	1" WATER SERVICE TO 1243 MTN RD	LS	1		
132	1" WATER METER ASSEMBLY	EA	51		
133	AIR VAC/RELEASE COMBO VALVE ASSEMBLY w/2" BLOWOFF AND VAULT	EA	3		
134	2'x3' PRECAST CONCRETE CATCH BASIN WITH HOODED INLET GRATE & FRAME	EA	2		
135	RECONSTRUCT DIPSTONE STRUCTURE	EA	3		
136	15" REINFORCED CONCRETE PIPE CLASS III	LF	80		
137	BOLLARD	EA	4		
138	2' DIAMETER BOULDER	EA	4		
139	12" DUCTILE IRON FULL LOOP (45 DEGREE BENDS)	EA	2		
140	CONNECT NEW STORM DRAIN TO EXISTING BOX	EA	2		
141	5' DIAMETER PRECAST (STORM DRAIN) MANHOLE	EA	1		
142	UDOT HMA PG 64-34 7" THICK	TN	65		
143	UDOT UTBC 18" THICK	TN	135		

Schedule 1 Total = \$ _____

Schedule 1 Total in Words _____

Signature _____

BID SCHEDULE No. 2

Mountain Rd - Canyon to 9th, WU015 - Mountain Road Water Line

BID ITEM	DESCRIPTION	BID UNIT	BID QUANTITY	UNIT PRICE	CONTRACT AMOUNT
201	REMOVE & REPLACE CONCRETE SIDEWALK 4" THICK (4" BASE)	SF	1160		
202	REMOVE & REPLACE CONCRETE FLATWORK 6" THICK (6" BASE)	SF	735		
203	DETECTABLE WARNING SURFACE	EA	11		
204	REMOVE & REPLACE CONCRETE CURB & GUTTER	LF	530		
205	6" CONCRETE CURBING (UP TO 12" TALL)	LF	150		
206	REMOVE CONCRETE PIPE	LF	115		
207	REMOVE DRAINAGE JUNCTION BOX	EA	2		
208	2'x3' PRECAST CONCRETE CATCH BASIN WITH HOODED INLET GRATE & FRAME	EA	3		
209	RECONSTRUCT DIPSTONE STRUCTURE	EA	8		
210	15" REINFORCED CONCRETE PIPE CLASS III	LF	125		

Schedule 2 Total = \$ _____

Schedule 2 Total in Words _____

Schedules 1 & 2 Total = \$ _____

Schedules 1 & 2 Total in Words _____

Signature _____

PART 3 MEASUREMENTS AND PAYMENT

3.1 GENERAL

- A. See measurement and payment procedures in APWA Section 01 29 00.
- B. ENGINEER will take all measurements and compute all quantities.
- C. CONTRACTOR will verify measurement and quantities.
- D. CONTRACTOR will provide all equipment, workers, and survey crews to assist ENGINEER in making measurements.
- E. Units of measurement are listed above in the bid schedule(s).

3.2 MOBILIZATION, Bid Item No. 101

- A. Measured by lump sum.
- B. Payment covers cost of mobilization, demobilization, installation of temporary facilities and bringing all necessary construction equipment to the site. **Covers additional costs to mobilize multiple times to satisfy paving requirements.** Payment will be made on a percentage basis as follows.

Percent of Original Contract Amount Earned	Percent of Amount Bid for Mobilization to be Paid
5	40
15	20
40	30
50	10

1.3 TRAFFIC CONTROL, Bid Item No. 102

- A. Measured by lump sum (LS).
- B. Payment covers traffic control plan accepted by Ogden City (and UDOT), traffic control technician, flaggers (if necessary), pavement markings, signs, barricades, and all traffic control devices (Refer to Section 01 55 26, Traffic Control). The traffic control plan shall be stamped by a Professional Engineer and submitted to both Emergency service and Ogden City's traffic engineer for approval.
- C. Payment covers any temporary trench fill (which will not be used for final trench fill section) for traffic flow and public safety purposes before final pavement section is added.

1.4 QUALITY CONTROL TESTING, Bid Item No. 103

- A. Measured by lump sum (LS).
- B. Payment: Covers cost of all Quality Control Testing as outlined in APWA 01 45 00 and the 2020 Edition of Ogden City's Engineering Standards for Public Improvements. **Testing will be required along the water line trenches (at mid depth and at grade) and will be required in the base below concrete items throughout the project as required by the**

ENGINEER.

1.5 SWPP PLAN, Bid Item No. 104

- A. Measured by lump sum (LS).
- B. Payment covers the CONTRACTOR in providing and maintaining a storm water pollution prevention plan as outlined by the State of Utah DWQ. Permit No. UTR300000 found at: <http://www.waterquality.utah.gov/UPDES/stormwatercon.htm> which outlines the required steps for preparing and maintaining the SWPPP, provides guidelines, examples, templates, BMP specifications, etc. The CONTRACTOR will be listed as an operator along with Ogden City. Payment also covers all erosion control that is not listed as separate bid items, which includes; silt fence, construction fencing, inlet protection, inlet clean-out (if necessary).
- C. Payment shall cover dust control/watering of the site, daily maintenance of the construction zone, daily sweeping, maintaining BMP devices, and maintaining general cleanliness of the site and staging areas during the construction process to the satisfaction of the City.
- D. Payment shall cover all fees associated with renting the water hydrant meter/backflow device from the Water Department.

1.6 CONSTRUCTION STAKING AND SURVEYING, Bid Item No. 105

- A. Measured by lump sum (LS).
- B. Payment shall be as a portion of the lump sum price bid and shall include all costs to provide construction surveying and staking for the project including all labor by the Contractor's Surveyor, equipment, materials and supplies necessary to provide survey preparation, control, staking offsets and markers necessary for construction of the water line system, storm drain system, curb & gutter, sidewalk, driveways, ped ramps, roadway, and appurtenances associated with the project.

3.6 UTILITY INVESTIGATION, Bid Item No. 106

- A. Measurement will be made by counting the actual number of hours of work completed by the machine and operator to investigate miscellaneous underground features as required by the ENGINEER (HR). No allowance of time will be made for transporting the backhoe to and from the job site when the backhoe is located on the site of the Contract.
- B. Payment covers furnishing and providing labor and equipment for investigation of existing miscellaneous pipelines, wires and cables, and sub-surface features as required by the ENGINEER. ENGINEER must approve time before Contractor is to proceed with any paid utility investigation.

3.7 ROADWAY EXCAVATION (PLAN QUANTITY), Bid Item No. 107

- A. Measured: Unclassified and classified excavation will be measured on a square yard (SY) basis and will be a plan set quantity as approved by the ENGINEER. This pay item applies

to required roadway excavation outside of utility trenches and/or T-patches.

- B. Payment: Pay quantities will be computed in the original position to the neat lines and grades or pay limits of excavation specified using a plan set quantity basis.
- C. Excavation done for CONTRACTOR'S benefit or excavation error, dewatering of excavation slough or overbreak is incidental work.
- D. This item will NOT pay for any utility trench excavation.

3.8 REMOVE & REPLACE CURB & GUTTER, Bid Item No. 108 and 204

- A. Measurement will be made by linear foot (LF), measured along the top back of curb (TBC).
- B. Payment covers the cost of furnishing all necessary materials and equipment, labor, hauling, disposal, placement, compaction, and testing to replace curb and gutter in accordance with Ogden City Standard Drawing RD-4 or to match existing adjacent curb & gutter configuration. (Refer to Section 32 16 13, Driveway, Sidewalk, Curb, Gutter).
- C. Payment includes compacted roadbase, formwork, joints, expansion, and dowelling into the existing curb and gutter.

3.9 REMOVE & REPLACE SIDEWALK 4" THICK, Bid Item No. 109 and 201

- A. Measured per square foot (SF) of new sidewalk placed. Removal of existing concrete in its place is incidental to this item.
- B. Payment covers the cost of furnishing all necessary materials and equipment, labor, hauling, disposal, placement, compaction, base course, concrete and testing to remove and replace sidewalk per Ogden City Standards (Refer to Section 32 16 13, Driveway, Sidewalk, Curb, Gutter).
- C. The location shown on the construction plans is an approximate location, and the exact location and quantity will be determined in the field with approval from the Owner or Owner's representative.

3.10 REMOVE & REPLACE CONCRETE FLATWORK 6" THICK, Bid Item No. 110 & 202

- A. Measurement will be made by square foot (SF) of 6" concrete (6" base) installed. Removal of any existing concrete in its place is incidental to this item. This item is to cover concrete work for driveways, pedestrian access ramps, and any concrete that is 6" thick.
- B. Payment covers the cost of furnishing all necessary materials, equipment, and labor, incidental to the removal and disposal of concrete and base material, placement, compaction, rebar, dowelling, jointing, and testing to install concrete driveway apron or pedestrian access ramps in accordance with Ogden City Standards (Refer to Section 32 16 13, Driveway, Sidewalk, Curb, Gutter).
- C. Payment also includes base material (6" thick minimum), expansion joints, compaction,

and special formwork and finish work on the driveway/pedestrian ramp for flares and curb cuts/curb forming.

3.11 DETECTABLE WARNING SURFACE, Bid Item No. 111 and 203

- A. Measurement shall be per each location (EA) basis. Measurement to be by each new ped ramp location as identified on the bid schedule and in the plan set.
- B. Payment shall be at the per each price and shall include all cost for labor, materials, tools, and equipment required to furnish and install the detectable warning surface that is gray in color. Also includes all other work necessary to complete this item to specifications, Ogden City Standards, and APWA standard plan #238.

3.12 6” PED CONCRETE CURBING (UP TO 12” TALL), Bid Item No. 112 and 205

- A. Measured per linear foot (LF).
- B. Payment covers the cost of furnishing all necessary materials and equipment, labor, hauling, disposal, placement, compaction, base course, concrete and testing to install 6” wide monolithic curbing at the back of the pedestrian access ramp (if necessary) for ramp to meet ADA standards (Refer to Section 32 16 13, Driveway, Sidewalk, Curb, Gutter).
- C. The location shown on the construction plans is an approximate location, and the exact location and quantity will be determined in the field.

3.13 REMOVE CONCRETE WATERWAY, Bid Item No. 113

- A. Measurement will be made by square foot (SF) of waterway removed and properly disposed.
- B. Payment covers the cost of furnishing all necessary materials, equipment, and labor incidental to the removal and disposal of waterway and base material.

3.14 REMOVE & REPLACE CONCRETE WATERWAY, Bid Item No. 114

- A. Measurement will be made by square foot (SF) of waterway installed. Removal of any waterway in its place will be considered incidental to this item.
- B. Payment covers the cost of furnishing all necessary materials, equipment, and labor incidental to the removal and disposal of waterway and base material, placement, compaction, rebar, dowelling, and testing to install concrete waterway in accordance with Ogden City Standard Drawing RD-6 (Refer to Section 32 16 13, Driveway, Sidewalk, Curb, Gutter).

3.15 REMOVE ASPHALT PAVEMENT, Bid Item No. 115

- A. Measured by square yard (SY) of asphalt pavement removed.
- B. Remove Asphalt Pavement shall be limited to the locations indicated on the Drawings or as directed by the Engineer. No direct payment shall be made for removal at locations not on the Drawings unless written direction is provided by the Engineer. The unit price named shall include all costs associated with; saw cutting; demolition, removal, and

disposal of waste material; and all other work or materials required to complete the work.
(Refer to Section 02 41 14, Pavement Removal)

3.16 REMOVE FIRE HYDRANT, Bid Item No. 116

- A. Measured by each (EA) fire hydrant assembly removed.
- B. Payment includes removal and disposal of hydrant system including but not limited to hydrant pipe, valve, and capping of existing 6” stem at the main in an acceptable manner to Ogden City; removal of the existing water pipe(s), and removal of the existing fire hydrant. SALVAGE existing hydrant at the request of the Ogden City Water Department. Payment also includes cost of excavation, removal, hauling, properly disposing of material, and any required backfilling and backfill material in the void left.
- C. Payment also includes the restoration of any landscaping items including but not limited to irrigation/sprinkler, and grass/sod.

3.17 REMOVE WATER VALVE BOX, Bid Item No. 117

- A. Measured per each valve box removed (EA).
- B. Payment covers the cost of furnishing all necessary materials and equipment, labor, demolition, backfill, patchwork, compaction, disposal, to remove existing water valve boxes as specified by the ENGINEER. (Refer to Section 02 41 13, Selective Site Demolition)

3.18 REMOVE WATER VALVE, Bid Item No. 118

- A. Measured per each valve removed (EA).
- B. Payment covers the cost of furnishing all necessary materials and equipment, labor, excavation, demolition, pipe replacement and connections in the removed valve’s place, backfill, asphalt patchwork, compaction, disposal, and testing to remove existing water valve as specified by the ENGINEER. Also included in payment is any salvaging required by the ENGINEER (Refer to Section 02 41 13, Selective Site Demolition).

3.19 EXISTING STRUCTURE – ADJUST TO GRADE, Bid Item No. 119

- A. Measurement will be made by actual count per each installed (EA)/adjusted to finish grade or each collar installed. For example, a valve cluster of three or four existing valves will count as one (1) item adjusted to finish grade.
- B. Payment covers all tools, labor, materials, and equipment to raise or lower existing structures to be flush with new grade as shown on Drawings. Payment covers all costs associated with raising or lowering the existing structure; including grade rings, removal and disposal of existing materials, concrete collars, seal, labor, and all other appurtenant work not otherwise stipulated to be paid for separately. Items to be raised to grade include valve(s), manholes, drainage boxes, catch basins, and survey monuments, all installed to 2020 Ogden City Standard Drawings.
- C. Payment covers the required coordination with the Ogden City Surveyor for supplying brass caps and any coordination with the Sewer Department for ordering manhole lids. New manhole covers will NOT be paid for with this item.

- D. Concrete for surface collars shall be obtained from batched concrete (i.e. Jack B. Parsons, Geneva, etc.)

3.20 APWA SPEC ROADBASE (1" MINUS, 8" THICK), Bid Item No. 120

- A. Measurement will be made by tons (TN).
- B. Payment covers the cost of furnishing all necessary materials, aggregate base course, labor, hauling, placement, and compaction to produce an acceptably deep aggregate base course layer per Ogden City Standard Drawings RD-3 and project plan specified thickness. Payment covers the cost of installing the full thickness of aggregate base course layer and preparation for pavement installation. (Refer to Section 33 05 25, Pavement Restoration)
- C. Untreated base course for curb and gutter, sidewalks, driveways, pedestrian ramps, and waterways are paid for under those respective bid items and are NOT included as part of this bid item.
- D. No payment will be made for aggregate base course purchased and installed as a temporary construction measure.
- E. No payment for this item will be made for aggregate base used as trench backfill (below the bottom of UTBC level).

3.21 ASPHALT "T" PATCH (1/2" ASPHALT, 5" THICK PG 58-28) Bid Item No. 121

- A. Measurement will be made by tons (TN).
- B. Payment covers the cost of furnishing all necessary materials, asphalt, tack coat equipment, labor, hauling, placement, and compaction to produce an acceptably deep excavation asphalt "T" patch per Ogden City Standard Drawing RD-3. Payment covers the cost of installing the full thickness of hot-mixed, hot laid asphalt concrete pavement (with no more than 15% recycled asphalt content). (Refer to Section 33 05 25, Pavement Restoration)
- C. Payment also covers street striping & symbols returned to existing conditions on patched asphalt.
- D. Payment also covers the costs of final sawcutting, "scratching" out the trench and general prep work prior to paving.
- E. Refer to project plans for asphalt thickness.
- F. Payment covers all costs associated with patching back any water line segment within two weeks after the segment has been fully commissioned.

3.22 2" OVERLAY (1/2" HMA, PG 58-28) Bid Item No. 122

- A. Measurement will be made by tons (TN).
- B. Payment covers the cost of furnishing all necessary materials, asphalt, tack coat equipment, labor, hauling, placement, and compaction to produce a 2" overlay. Payment covers the cost of installing the full thickness of hot-mixed, hot laid asphalt concrete pavement (with no more than 15% recycled asphalt content). (Refer to Section 33 05 25, Pavement Restoration). Edge milling will be provided by others.

3.23 8" PVC C-900 DR18 PIPE, Bid Item No. 123

- A. Measurement shall be made per linear foot (LF) of 8 INCH PVC C-900 DR18 water line installed as measured from connection point to connection point along the centerline of the pipeline.
- B. Payment shall be made at the linear foot price bid and shall include all material, labor, tools, and equipment to coordinate construction, install water line including shoring or stabilization, de-watering, and dust control following all water line trench standards per plan W-18.
 - 1. Payment covers the cost of incidental work such as potholing, fittings, corporation stops, couplings, joint lubricants, gaskets, jackhammer work; underground line marking tape; landscape replacement if damaged by CONTRACTOR'S operations; restoration of all utilities damaged as a result of operations; site dewatering; water main repair or replacement if damaged by CONTRACTOR; and similar work to complete the installation of the water line.
 - 2. Furnishing and installing DI bends, crosses, tees, and fittings identified on the construction drawings except those specifically listed in other bid items; plugging of existing pipes as required on the plans, etc.,
 - 3. Polywrap all Ductile fittings with 8Mil Polyethylene sheet and Tape Wrap.
 - 4. All costs for concrete thrust blocks, including fabric wrapping to protect bolts and followers from the concrete. Install the concrete thrust blocking with the minimum bearing surface indicated to Ogden City W-16 standard drawing.
 - 5. Provide and install all MEGA-LUG followers, pipe joint restraints as labeled in the plans, or approved equal on all fittings, tees, and bends, all costs for the labor and equipment to saw cut the pipe for connections as required.
 - 6. All C-900 DR18 PVC pipe shall have 12 ga. insulated tracing wire installed with the pipe. Tracing wires shall terminate in Snakepit tracer box style (CD14BT or approved equal) according to Ogden City Standard W-1B. Marking tape shall also be installed with the pipe per Ogden City Standards.
 - 7. Cost to clean the interior of the line by sweeping and/or spraying to remove any accumulated debris, sand or foreign materials prior to the installation of the pipe in the trench. Payment includes the cost to pressure test the line, perform bacteria tests on the line, disinfect the line and flush the line. Payment includes all costs associated with dust control including evenings and weekends between 7:00 am and 9:00 pm, or as required by the City Engineer.
- C. Payment shall include all trenching costs associated with this item including all import pipe bedding, backfill, and compaction. Payment includes all excavation and removal of material for installation of the pipe. Sand bedding shall be placed a minimum of 6 inches below the bottom of pipe and 12 inches above the top of pipe. Material placed as backfill above the pipe bedding material shall be APWA 3" Minus Granular Fill Borrow or better (1" Road base preferred).

3.24 8" GATE VALVE (CLASS 250), Bid Item No. 124

- A. Measurement will be made by actual count per each EA gate valve installed
- B. Payment covers the cost of excavation, foundation preparation, restraint devices, cast iron slip-type valve boxes per Ogden City Standards and project plan details. Payment covers traffic lids, valve, concrete collar sealed, backfill, backfill material, and other miscellaneous devices, materials, or equipment required for a complete installation. Ogden City's Water Department Approved Materials List should be consulted for acceptable valve types. (Refer to Section 33 12 16, Water Valves)
- C. Valves shall be greased and wrapped. Documentation of wrapped valve is required prior to backfill.
- D. Payment shall include raising the valve box to final grade and providing the 12-inch thick, 12-inch wide, concrete collar around the cover(s) meeting city standards. Concrete for collars shall be obtained from batched concrete (i.e. Jack B. Parsons, Geneva, etc.)

3.25 12" PVC C-900 DR18 PIPE, Bid Item No. 125

- A. Measurement shall be made per linear foot (LF) of 12 INCH PVC C-900 DR18 water line installed as measured from the connection point to the connection point along the centerline of the pipeline.
- B. Payment shall be made at the linear foot price bid and shall include all material, labor, tools, and equipment to coordinate construction, install water line including shoring or stabilization, de-watering, and dust control following all water line trench standards per plan W-18.
 - 1. Payment covers the cost of incidental work such as potholing, fittings, corporation stops, couplings, joint lubricants, gaskets, jackhammer work; underground line marking tape; landscape replacement if damaged by CONTRACTOR'S operations; restoration of all utilities damaged as a result of operations; site dewatering; water main repair or replacement if damaged by CONTRACTOR; and similar work to complete the installation of the water line.
 - 2. Furnishing and installing DI bends, crosses, tees, and fittings identified on the construction drawings except those specifically listed in other bid items; plugging of existing pipes as required on the plans, etc.,
 - 3. Polywrap all Ductile fittings with 8Mil Polyethylene sheet and Tape Wrap.
 - 4. All costs for concrete thrust blocks, including fabric wrapping to protect bolts and followers from the concrete. Install the concrete thrust blocking with the minimum bearing surface indicated to Ogden City W-16 standard drawing.
 - 5. Provide and install all MEGA-LUG followers, pipe joint restraints as labeled in the plans, or approved equal on all fittings, tees, and bends, all costs for the labor and equipment to saw cut the pipe for connections as required.
 - 6. All C-900 DR18 PVC pipe shall have 12 ga. insulated tracing wire installed with the pipe. Tracing wires shall terminate in Snakepit tracer box style (CD14BT or approved equal) according to Ogden City standard W-1B. Install warning tape per City Standards.
 - 7. Cost to clean the interior of the line by sweeping and/or spraying to remove any accumulated debris, sand or foreign materials prior to the installation of the pipe in the trench. Payment includes the cost to pressure test the line, perform bacteria tests on

the line, disinfect the line and flush the line. Payment includes all costs associated with dust control including evenings and weekends between 7:00 am and 9:00 pm, or as required by the City Engineer.

- C. Payment shall include all trenching costs associated with this item including all import pipe bedding, backfill, and compaction. Payment includes all excavation and removal of material for installation of the pipe. Sand bedding shall be placed a minimum of 6 inches below the bottom of pipe and 12 inches above the top of pipe. Material placed as backfill above the pipe bedding material shall be APWA 3" Minus Granular Fill Borrow or better (1" Road base preferred).

3.26 12" BUTTERFLY VALVE (CLASS 250), Bid Item No. 126

- A. Measurement will be made by actual count per each installed (EA).
- B. Payment covers the cost of excavation, foundation preparation, restraint devices, cast iron slip-type valve boxes per Ogden City Standards and project plan details. Payment covers traffic lids, valve, concrete collar, seal, backfill and other miscellaneous devices, materials, or equipment required for a complete installation. Ogden City's Water Department Approved Materials List should be consulted for acceptable valve types. (Refer to Section 33 12 16, Water Valves)
- C. Valves shall be greased and wrapped. Documentation of wrapped valve is required prior to backfill.
- D. Payment shall include raising the valve box to final grade and providing the 12-inch thick, 12-inch wide, concrete collar around the cover(s) meeting city standards. Concrete for collars shall be obtained from batched concrete (i.e. Jack B. Parsons, Geneva, etc.)

3.27 WATER LINE CONNECTION, Bid Item No. 127

- A. Measurement shall be made per each (EA) connection made to the existing water main. No additional payment will be made for additional connections due to contractor phasing of construction requiring connections from new main to new main.
- B. Payment shall be made at the unit price bid and shall include all labor, materials, tools, and equipment to furnish and install the fittings necessary to complete the connection between the existing pipe and the new pipe. Payment includes all costs to locate and excavate the existing water main and connect the new C-900 DR18 to the existing main as shown on the plans. Payment includes removal of up to 30 feet of the existing pipe, if required, to make the connection with the existing pipes including looping the new C-900 DR18 pipe to match the elevation of the existing waterline, prepare the ends of the pipe and to remove and legally dispose of the removed pipe and fittings.
- C. Contractor is responsible to pothole and verify the pipe depth, material and size of existing waterlines prior to ordering parts and fittings. Payment includes all costs to furnish and install sleeve connections with MEGA-LUG followers or approved equal on the mechanical joint ends and all costs for required concrete thrust blocks.
- D. Payment includes all costs to coordinate with the Ogden City Water Department for all water shutdowns necessary for installation of the complete connection. Payment includes written notifications to all residents affected by any water service interruption. Payment includes costs for excavation, backfill and compaction, compaction testing,

blue staking, potholing, legal waste disposal, all landscaping related and sod restoration not covered under other items, and plugging and blocking the end of the mains to be abandoned, and all associated work items required to complete this bid item.

- E. Payment includes all connection pieces to be properly swabbed and disinfected with chlorine.
- F. Payment shall be made at the unit price bid and shall include all costs to remove the existing pipe, saw-cut, remove, and legally dispose of pipe waste materials; plugging of existing pipes as required on the plans; provide trench excavation with legal disposal of excavated waste materials, shoring or stabilization, and de-watering; excavate existing excess material to provide for the finish street structure.

3.28 INSTALL NEW FIRE HYDRANT ASSEMBLY, Bid Item No. 128

- A. Measurement will be made by actual count per each (EA) installed.
- B. Payment covers the cost of excavation, soil preparation, potholing, installing the new fire hydrant with surface coatings and fittings, 6-inch ductile iron supply main piping and any required bends/loops around existing utilities, connection of the new fire hydrant to new water main with ductile iron pipe with exterior of pipe tape wrapped; gate valves with cast iron slip-type valve boxes, traffic lids; miscellaneous tees, sleeves, bends, gaskets, bolts, nuts; approved joint restraining devices; greasing and wrapping all exposed fittings, bolts and nuts; pipeline dewatering; concrete thrust restraints; concrete box repair, painting and other miscellaneous devices; snake pit boxes with tracer wire, collars; and all other materials/labor necessary to install new fire hydrant assembly according to Ogden City Standard Drawings W-1A, W-1B, & W-2.
- C. Payment shall include raising the valve box to final grade and providing the 12-inch thick, 12-inch wide, concrete collar around the cover(s) meeting city standards. Concrete for collars shall be obtained from batched concrete (i.e. Jack B. Parsons, Geneva, etc.).
- D. Payment includes painting the fire hydrant barrel safety yellow and the caps/bonnet the color determined from a flow test performed by the water department after paving is completed (Refer to Section 33 12 19 SP Hydrants for more details).

3.29 1" AWWA C901 SERVICE LATERAL, Bid Item No. 129

- A. Measurement will be made by linear foot (LF) of service line installed.
- B. Payment covers the cost of excavation, soil preparation, potholing, import pipe bedding and backfill, disturbed concrete repair and disposal, the new water lateral CTS Poly piping, connection of the new water lateral to new water main, connection of the new water lateral to the servicing meter, connection of the new meter to the property side service connection with any necessary adaptors/reducers, service tapping and tap saddles, corp. stops, existing removal or abandonment and disposal of the existing water pipe(s), disinfection and commissioning pipeline; and other work incidental to the installation of the water lateral. It is preferred that boring/pulling of the water lateral occur before open trench excavation is used. However, all excavation, backfill material, placement, compaction and landscape restoration required to install the service line will be paid for under this bid item. (Refer to Section 33 12 33, Water Meter)

3.30 1" WATER SERVICE TO 1255 MTN RD, Bid Item No. 130

- A. Measurement will be made by each (EA) complete water service installed.
- B. Payment covers all labor, materials, and equipment for excavation, soil preparation, potholing, import pipe bedding and backfill, disturbed concrete repair and disposal, the new water lateral CTS Poly piping, connection of the new water lateral to new water main, connection of the new water lateral to the servicing meter, connection of the new meter to the property side service connection, service tapping and tap saddles, corp. stops, existing removal or abandonment and disposal of the existing water pipe(s), disinfection and commissioning pipeline; and other work incidental to the installation of the water service. It is preferred that boring/pulling of the water lateral occur before open trench excavation is used. However, all excavation, backfill material, placement, compaction and landscape restoration required to install the service line will be paid for under this bid item. (Refer to Section 33 12 33, Water Meter)
- C. Payment covers the cost to reconnect any existing irrigation connections
- D. Payment covers the cost to install a new 1" water meter assembly as specified in Bid item No. 130.

3.31 1" WATER SERVICE TO 1243 MTN RD, Bid Item No. 131

- A. Measurement will be made by each (EA) complete water service installed.
- B. Payment covers all labor, materials, and equipment for excavation, soil preparation, potholing, import pipe bedding and backfill, disturbed concrete repair and disposal, the new water lateral CTS Poly piping, connection of the new water lateral to new water main, connection of the new water lateral to the servicing meter, connection of the new meter to the property side service connection, service tapping and tap saddles, corp. stops, existing removal or abandonment and disposal of the existing water pipe(s), disinfection and commissioning pipeline; and other work incidental to the installation of the water service. It is preferred that boring/pulling of the water lateral occur before open trench excavation is used. However, all excavation, backfill material, placement, compaction and landscape restoration required to install the service line will be paid for under this bid item. (Refer to Section 33 12 33, Water Meter)
- C. Payment covers the cost to reconnect any existing irrigation connections
- D. Payment covers the cost to install a new 1" water meter assembly as specified in Bid item No. 130.

3.32 1" WATER METER ASSEMBLY, Bid Item No. 132

- A. Measurement will be made by actual count per each installed (EA).
- B. Payment covers the cost of excavation, potholing, and new meter setter materials (fill) and devices; acquisition and installation of new Raven meter box, ring & cover, removal and disposal of existing meter assembly and meter box, extension of the service lateral from the new meter to the old meter location, connection of the new water lateral to the servicing meter in-line with the existing service connections, removal or abandonment of the existing water lateral tubing, disinfection and commissioning of the lateral; restoration of all landscaping; and other miscellaneous devices, materials, or equipment required for

a complete installation; all in accordance with Ogden City Standard Drawing W-3. Note, most existing meters are 5/8" or 3/4". Payment includes the necessary adaptors to connect the new 1" line to the existing meter. New meters can be purchased from Ogden City Water Department if necessary. Ogden City's Water Department Approved Materials List should be consulted for acceptable equipment types. (Refer to Section 33 12 33, Water Meter).

- C. Payment covers the labor and tools necessary to install water meter "buttons" on the face of curb (adhesive and buttons will be provided by the Water Department).

3.32 AIR VAC/RELEASE COMBO VALVE ASSEMBLY w/2" BLOWOFF AND VAULT, Bid Item No. 133

- A. Measurement will be made by actual count per each assembly installed (EA).
- B. Payment covers the all materials, labor, and equipment to install air/vac combo valves, isolation valves, actuators, pipe taps, tapping saddles, pipe supports, precast concrete vaults, pipe penetrations/seals, damp proofing, subgrade crushed rock, frost-proof manhole ring and cover, manhole steps, air vents; excavation, bedding and backfill; and all other appurtenant work as detailed on the Drawings or not otherwise stipulated to be paid for separately for a complete air/vac combination valve and vault installation.
- E. Payment shall include raising the manhole cover to final grade and providing the 12-inch thick, 12-inch wide, concrete collar around the cover(s) meeting city standards. Concrete for collars shall be obtained from batched concrete (i.e. Jack B. Parsons, Geneva, etc.).

3.33 2'x3' PRECAST CONCRETE CATCH BASIN WITH HOODED INLET GRATE & FRAME, Bid Item Nos. 134, 208

- A. Measurement shall be made on a per each (EA) basis. Measurement to be by actual field count of each type, and size of installed structure identified on the bid schedule and in the plan set.
- B. Payment shall be made per each price and shall include all labor, materials, and equipment for furnishing and installing each type of storm drain catch as a precast basin and box. Payment also includes excavation; concrete; supplying and installing all precast structures, risers, grates, and covers; additional cast-in-place concrete; grout; concrete collars for pipe connections; core drilling; connections to existing and/or new pipes; backfill material, installing material and compaction; and all other items needed to complete the work including cleaning and placing structures in service.

3.34 RECONSTRUCT DIPSTONE, Bid Item Nos. 135, 209

- A. Measurement shall be made on a per each (EA) basis. Measurement to be by actual field count of each type, and size of installed structure identified on the bid schedule and in the plan set.
- B. Payment shall be made per each price and shall include all labor, materials, and equipment for furnishing and installing each dipstone structure as identified in the project plans and

details and shall include removal of existing structure, pipe, concrete , excavation, forming, reinforcement, concrete, grates/frames, and other work incidental to installing the new dipstone structure as shown in the plans and details.

3.35 15” REINFORCED CONCRETE PIPE CLASS III, Bid Item Nos. 136, 210

- A. Measurement shall be made per linear foot (LF) measured in the field to the nearest foot, for the type, size and class as indication. Unless indicated otherwise, measurement to be along the pipe from the inside face to inside face of manholes, catch basins, or other structures, or to the end of the pipe where no structure exists, with no deduction for fittings.
- B. Payment shall be made at the linear foot price bid and shall include all costs for furnishing and installing the pipe, including couplings; gaskets; adapters; plugs; capping or plugging of the existing storm drain pipe(s) to be abandoned; trench boxes or shoring as needed; connection of the existing storm drain to the new storm drain; reconnection of existing storm drain laterals to the new storm drain manholes; connecting new storm drain to existing structures; pipe cutting; field collars; cleaning new pipe prior to acceptance by owner, commissioning pipelines. Payment also includes measures to protect the new pipeline from being damaged or filled with sediment from a runoff event during construction.
- C. Payment shall be at the linear foot unit price bid and shall include all costs to furnish and stockpile the import bedding (3/8” Minus Sand) and pipe haunching material (Sewer Rock ASTM Size No. 4), stockpile and import granular backfill materials (APWA - 2” Minus Granular Fill Borrow or better); excavate the trench; excavation for bells; place, shape, compact and prepare the material around the pipe, provide compaction and gradation tests, provide certified scale tickets for the material delivered, dewatering, and traffic control. All trenching is to conform to Ogden City Standards for material, placement, depth, and compaction. Trench width must be a minimum of 4’ wide. Pipe bedding shall be placed a minimum of six inches below the pipe and up to the bottom of pipe. The pipe haunching material shall be placed above the bedding material to the pipe spring line. The import granular backfill borrow shall be placed directly above the import pipe haunching material to the bottom of the untreated base course layer. There will be no payment for over excavation unless approved in written form by the engineer prior to the excavation.

3.36 BOLLARD, Bid Item No. 137

- A. Measurement shall be per each (EA) bollard installed.
- B. Payment shall cover all materials, labor, and equipment for installing the bollard as shown in the project details including all excavation and removal of material, concrete foundation, pipe, grout dome, reflective paint, and any disturbed landscaped to be restored in its place.

3.37 2’ DIAMETER BOULDER, Bid Item No. 138

- A. Measurement shall be per each (EA) boulder installed.
- B. Payment shall cover all materials, labor, transportation, and equipment for installing the boulder as directed by the Engineer in-lieu of a bollard.

3.38 12" DUCTILE IRON LOOP, Bid Item No. 139

- A. Measurement shall be per each (EA) ductile iron loop installed, measured from top vertical bend to top vertical bend.
- B. Payment shall cover all materials, labor, and equipment for installing the ductile iron loop as shown in the plans and shall cover the costs to install water line as specified in bid item 123 (12" PVC C900) and shall cover the additional costs incurred to install the loop with all joints and fittings restrained with ductile iron joint/fitting restraints at the required depth. The pipe is to be 12" ductile iron Class 350 throughout the entire looped portion (top bend to top bend). This item shall cover any additional costs such as traffic control, dewatering, extra depth trenching (excavation, additional bedding and fill compacted), and additional fittings. No concrete thrust restraints are anticipated for this item. Payment covers the costs to wrap the pipe and fittings fully in 8 mil thick polywrap according to AWWA M41 – Ductile Iron Pipe & Fittings Manual.
- C. Payment shall cover costs to place flowable fill in the case that the existing structure is undermined at any point during excavation.

3.39 CONNECT NEW STORM DRAIN TO EXISTING BOX, Bid Item No. 140

- A. Measurement shall be per each (EA) storm drain pipe connection to an existing box.
- B. Payment shall cover all materials, labor, and equipment for making the connection to the existing box and shall include any necessary work and materials such as sawcutting, disconnection of existing pipe, cutting new pipe to length, grouting and sealing the connection point to the box, and collaring the outside of the pipe at the box for additional support.

3.40 5' DIAMETER PRECAST (STORM DRAIN) MANHOLE, Bid Item No. 141

- A. Measurement shall be made on a per each (EA) basis. Measurement to be by actual field count of each type, and size of installed structure identified on the bid schedule and in the plan set.
- B. Payment shall be made per each price and shall include all labor, materials, and equipment for furnishing and installing each type of storm drain manhole at required full depth with sump. Payment also includes excavation; concrete; supplying and installing all precast structures, risers, manhole lids and covers to Ogden City Standard details, additional cast-in-place concrete; grout; concrete collars for pipe connections; core drilling; connections to existing and/or new pipes; backfill material, installing material and compaction; and all other items needed to complete the work including cleaning and placing structures in service.
- C. Payment shall include raising cover to final grade and installing a concrete collar on the surface per Ogden Standards. Concrete for surface collars shall be obtained from batched concrete (i.e. Jack B. Parsons, Geneva, etc.)

3.41 UDOT HMA ¾" PG 64-34, Bid Item No. 142

- A. Measurement will be made by tons (TN).
- B. Payment covers the cost of furnishing all necessary materials, asphalt, tack coat

equipment, labor, hauling, placement, and compaction to produce an acceptably deep excavation asphalt section per UDOT Standards Payment covers the cost of installing the full thickness of hot-mixed, hot laid asphalt concrete pavement (with no more than 25% recycled asphalt content). (Refer to Section UDOT 02741)

- C. Payment also covers street striping & symbols returned to existing conditions on patched asphalt.
- D. Refer to project plans for asphalt thickness.

3.42 UDOT UTBC 18" THICK, Bid Item No. 143

- A. Measurement will be made by tons (TN).
- B. Payment covers the cost of furnishing all necessary materials, untreated base course, labor, hauling, placement, and compaction to produce an acceptably deep (18 inches compacted) untreated base course layer per UDOT Standards (see Section UDOT 02721). Payment covers the cost of installing the full thickness of untreated base course layer and preparation for pavement installation.
- C. Untreated base course for curb and gutter, sidewalks, driveways, pedestrian ramps, and waterways are paid for under those respective bid items and are NOT included as part of this bid item.
- D. No payment will be made for untreated base course purchased and installed as a temporary construction measure.
- E. Payment covers the costs to backfill in 8" thick lifts.

3.44 REMOVE CONCRETE PIPE, Bid Item No. 206

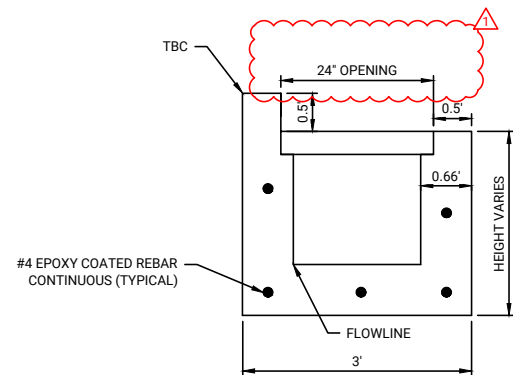
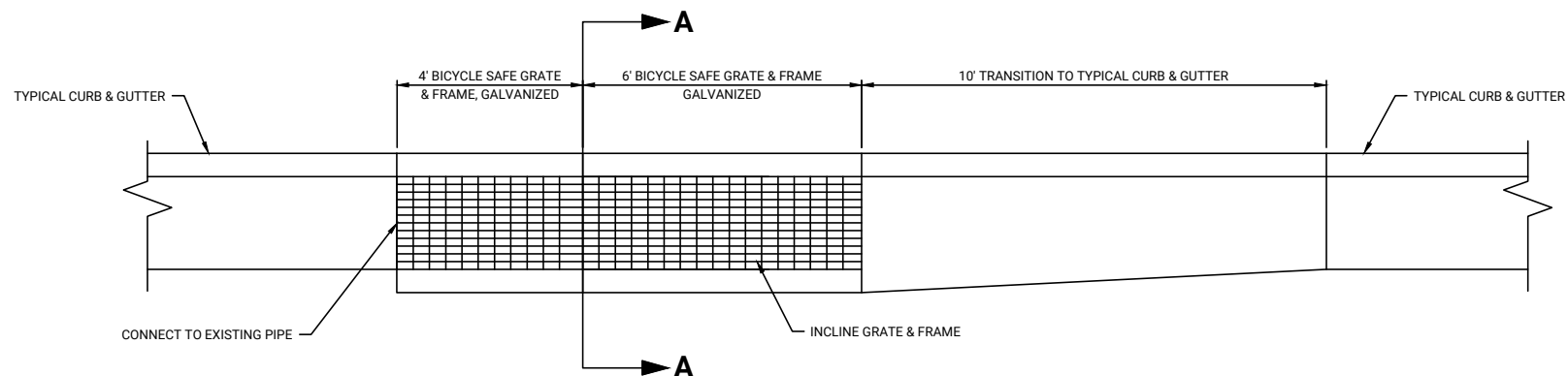
- A. Measurement shall be made per linear foot (LF) basis, measured in the field, to the nearest foot. Unless indicated otherwise, measurement to be along the pipe from the inside face to inside face of manholes or other structures, or to the end of the pipe where no structure exists.
- B. Payment shall be made at the linear foot price and shall include all costs for labor, tools, materials, and equipment involved in excavating, removing, and disposing of the existing storm drain pipe as shown on the drawings. Payment also includes excavation; supplying, installing, and compacting import granular backfill to the necessary grade under the direction of the engineer, and restoring any adjacent facilities disturbed by construction activities associated with this item.

3.45 REMOVE DRAINAGE JUNCTION BOX, Bid Item No. 207

- A. Measurement shall be made per each (EA) basis. Measurement to be by actual field count of each existing storm drain manhole, cleanout box, catch basin, or structure is removed and disposed of.
- B. Payment shall be made at the per each bid and shall include all costs for labor, tools, materials, and equipment involved in excavating, removing and disposing of existing storm drain facilities and other miscellaneous items required to complete the work. Payment also includes supplying, installing, and compacting backfill materials and

restoring any adjacent facilities disturbed by construction activities associated with this item.

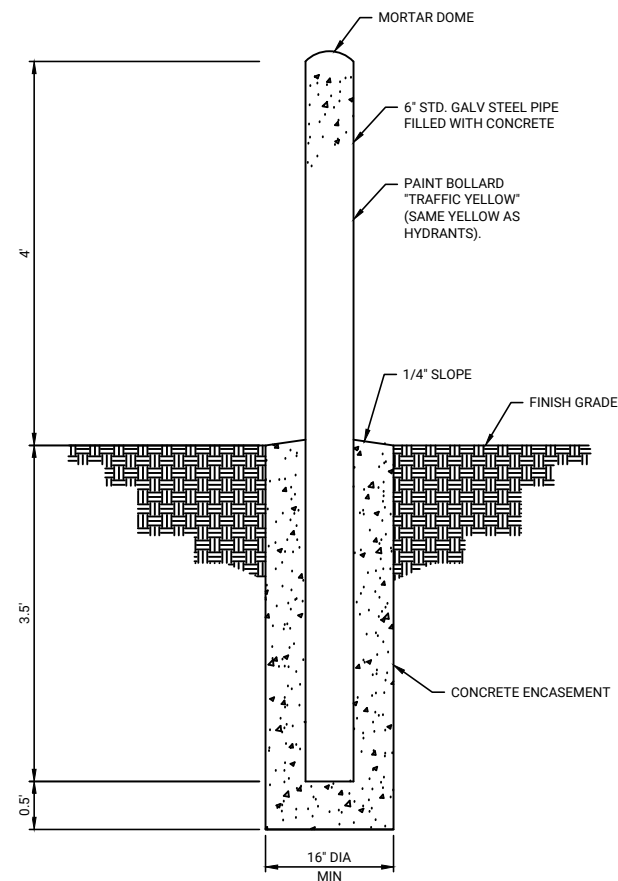
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SECTION A-A

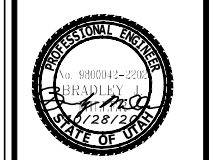
1. POUR CONCRETE ON 6" THICK COMPACTED ROADBASE PER APWA 32 11 23
2. GRATES AND FRAMES TO BE GALVANIZED, HS-20 TRAFFIC RATED, & BICYCLE SAFE.
3. ANGLE IRONS (GALVANIZED) TO BE CAST/FORMED INTO CONCRETE AT THE DIMENSIONS SHOWN.

A DETAIL - TYPICAL DIPSTONE RECONSTRUCT
DT1 NTS



B DETAIL - BOLLARD
DT1 NTS

REV	DATE	DESCRIPTION	REVISION
1	10/28/20		



DESIGNED	BJM	DATE
DRAWN <td>BJM</td> <td>10/28/2020</td>	BJM	10/28/2020
CHECKED <td>TDN</td> <td></td>	TDN	

DRAWING SCALE
 H: 1" = 20' (22x34) (11x17)
 V: 1" = 5' (22x34) (11x17)

This bar measures the original drawing.

DETAILS
MOUNTAIN RD - CANYON RD TO 9TH
 UTILITY IMPROVEMENTS
 PLOT DATE: 10/28/2020 12:57 PM
 DRAWING NAME: DT-1.dwg