ADDENDUM #3 TO THE BID & SPECIFICATIONS

February 10, 2023

This Addendum forms a part of the Contract Documents and modifies the original specifications and drawings, as advertised on January 05, 2023. This Addendum consists of these 2 pages including this cover page with three (3) attachments. This addendum is a total of twenty-nine (29) pages.

The Bid Date of February 16, 2023 has not been changed.

** Please sign, date and return e-mail this sheet to Buchart Horn, Inc. (e-mail: dvesely.com). Failure to acknowledge this addendum ON THE BID FORM may subject Bidder to disqualification.

I have received all 29 pages in Addendum #3.

Name	Company	Date

02/10/2023

LIST OF ATTACHMENTS (Referenced below)

1. Bid Schedule – 2 pages
2. Section 01650 Measurement and Payment – 20 pages
3. Modified Sheets G-004, C-001, C-002, C-501 and C-502 – 5 pages

CHANGES TO SPECIFICATIONS

Section BS – Bid Schedule. Replace the Bid Schedule with this modified bid schedule dated February 10, 2023. (Attachment 1). Note this bid schedule also corrects the quantity for Bid Item 53A, Sodding of Temporary Gravel Road Area.

Section 01650 Measurement and Payment. Replace this section in its entirety with the attached Section 01650. (Attachment 2) dated February 10, 2023. This updated section:

1. Modifies Bid Items 5 –7 to require reinstallation of restrictor on new headwall.
2. Modifies Bid Items 8-54 Gravity Sewer Pipelines to clarify that protection of underground services part of these bid items.
3. Modifies Manhole bid items (40-47 & 49) to include provision of gooseneck vent pipe
4. Modifies Bid Item 52 – in lieu of Temporary pavement, this item now covers paving in trenches.
5. Modifies Bid item 54 – include of paving and overlay, this bid item is now for Road overlay only.

CHANGES TO DRAWINGS

Replace Sheet G-004 with attached G-004. Changes include:

- Modifies note 26 to allow an extended Road Closure and provide additional requirements related to closure.

Replace Sheet C-001 with Attached C-001. Changes include:

- Modifies note “EXIST. ASPHALT PAVEMENT (TO BE REMOVED AND REPLACED)” to read ““EXIST. ASPHALT PAVEMENT (TO BE OVERLAYED)”
- Modifies note 4 to describe road overlay.

Replace Sheet C-002 with Attached C-002. Changes include:

- Modifies note “EXIST. ASPHALT PAVEMENT (TO BE REMOVED AND REPLACED)” to read ““EXIST. ASPHALT PAVEMENT (TO BE OVERLAYED)”
- Modifies note 4 to describe road overlay.
- Removes Note 6. Jersey Barriers are not required on Chambers Chapel Road.

Replace Sheet C-501 with attached C-501. Changes include:

- Modifies Detail 1, Typical Pipe Utility Crossing Trench Detail Paved Areas to limit detail to trench only. It now - refers to paving detail on Sheet C-502.

Replace Sheet C-502 with attached C-502. Changes include:

- Modifies City of Lakeland Standard Typical Pavement Repair Detail. Detail is applicable to all trenches requiring paving.
- Adds Note 11 to Detail 3 to list materials for gooseneck vent pipes.

END OF ADDENDUM 3

ADDENDUM 3
ATTACHMENT 1

FEBRUARY 10, 2023

BID SCHEDULE
CLEAR CREEK INTERCEPTOR - SANITARY SEWER PHASE A

BID DATE: _____

COMPANY NAME: _____

ADDRESS: _____

Contractor shall furnish and install items as shown on the Drawings or called for in the Specirications. All costs not included in the schedule that are necessary to provide a complete, functional project as depicted in the Drawings and Specifications are to be considered incidental and merged with costs of other related bid items.

LS = Lump Sum R&R = Remove and Replace LF = Linear Feet F&I = Furnish and Install LS = Lump Sum
SY = Square Yard CY = Cubic Yard EA = Each Ton = Ton LB = Pounds VF = Vertical Feet w/ = with

Schedule A

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
A	Mobilization and Demobilization	1	LS	$	$
B	Perimeter EPSC Measures	1	LS	$	$
C	Clearing and Grubbing	1	LS	$	$
1	Creekside Manor Lift Station Demolition and Wet Well Conversion	1	LS	$	$
2	Oakwood Grove Lift Station Demolition and Wet Well Conversion	1	LS	$	$
3	Wellhouse Demolition and Well Abandonment	1	LS	$	$
4	Scott's Creek WWTP Influent Wet Well & ancillary work, complete in place, w/ testing	1	LS	$	$
5	Remove & Replace 15" CPP (Sheet C-101), complete in place, including testing	29	LF	$	$
6	Remove & Replace 18" RCP (Sheet C-119), complete in place including testing	38	LF	$	$
7	Remove & Replace 36" RCP (Sheet C-119), complete in place with Headwall & Restrictor, including testing	30	LF	$	$
8	10" SDR 26 PVC Gravity Sewer(8-10' Deep), complete in place, w/testing	1,038	LF	$	$
9	10" SDR 26 PVC Gravity Sewer(10'-12' Deep), complete in place, w/testing	223	LF	$	$
10	10" SDR 21 PVC Gravity Sewer(16-18' Deep), complete in place, w/testing	250	LF	$	$
11	18" SDR 26 PVC Gravity Sewer(14-16' Deep), complete in place, w/testing	290	LF	$	$
12	18" SDR 26 PVC Gravity Sewer(14-16' Deep), in paving complete in place, w/testing	787	LF	$	$
13	18" DR 21 C900 PVC Gravity Sewer(16'-18' Deep), in paving complete in place, w/testing	150	LF	$	$
14	18" DR 21 C900 PVC Gravity Sewer(18-20' Deep), in paving complete in place, w/testing	861	LF	$	$
15	18" DR 21 C 900 PVC Gravity Sewer(20-22' Deep), in paving complete in place, w/testing	933	LF	$	$
16	18" DR 21 C900 PVC Gravity Sewer(22-24' Deep), in paving complete in place, w/testing	411	LF	$	$
17	24" SN 42 GRP Gravity Sewer (12-14' Deep), complete in place, w/testing.	103	LF	$	$
18	42" SN 42 GRP Gravity Sewer (10-12' Deep), complete in place, w/testing	806	LF	$	$
19	42" SN 42 GRP Gravity Sewer (12-14' Deep), complete in place, w/testing	2,981	LF	$	$
19A	42" SN 72 GRP Gravity Sewer (12-14' Deep), complete in place, w/testing	435	LF	$	$
20	42" SN 72 GRP Gravity Sewer (12-14' Deep), extra bedding width, complete in place, w/testing	1,486	LF	$	$
21	42" SN 42 GRP Gravity Sewer (14-16' Deep), complete in place, w/testing	3,816	LF	$	$
22	42" SN 72 GRP Gravity Sewer (14-16' Deep), extra bedding width, complete in place, w/testing	1,105	LF	$	$
23	42" DIP Gravity Sewer (14-16' Deep), complete in place, w/testing	40	LF	$	$
24	42" SN 72 GRP Gravity Sewer (16-18' Deep), complete in place, w/testing	1,489	LF	$	$
25	42" SN 72 GRP Gravity Sewer (18-20' Deep), complete in place, w/testing	1,519	LF	$	$
26	42" DIP Gravity Sewer (18-20' Deep),complete in place, w/testing	330	LF	$	$
27	42" SN 72 GRP Gravity Sewer(20-22' Deep), complete in place, w/testing	360	LF	$	$
28	42" SN 72 GRP Gravity Sewer (20-22' Deep), in paving complete in place, w/testing	20	LF	$	$
29	42" DIP Gravity Sewer (20-22' Deep), complete in place, w/testing	90	LF	$	$
30	42" SN 72 GRP Gravity Sewer (22-24' Deep), complete in place, w/testing	309	LF	$	$
31	42" DIP Gravity Sewer (22-24' Deep), complete in place, w/testing	75	LF	$	$
32	42" SN 72 GRP Gravity Sewer(24-26' Deep), complete in place, w/testing	33	LF	$	$
33	42" SN 72 GRP Gravity Sewer (24-26' Deep), in paving complete in place, w/testing	67	LF	$	$
34	42" DIP Gravity Sewer (24-26' Deep), complete in place, w/testing	119	LF	$	$
35	6" PVC Gravity Lateral (14-16' Deep) incl. connect to 18" sewer, in paving, complete in place w/testing	340	LF	$	$

Clear Creek Interceptor Sanitary Sewer Phase A - Shedule A continued

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
36	6" PVC Gravity Lateral (8-10' deep) incl. connect to MH in paving complete in place w/ testing	40	LF	$	$
37	6" PVC Gravity Lateral (10-12' deep) incl. connect to MH in paving complete in place w/ testing	359	LF	$	$
38	6" PVC Gravity Lateral (12-14' deep) incl. connect to MH in paving complete in place w/ testing	45	LF	$	$
39	6" PVC Deep Lateral Connection incl concrete	12	VF	$	$
40	MH, 48" Dia., 0-6' Deep, complete in place	11	EA	$	$
41	MH, 48", Extra Depth, Over 6' Deep, complete in place.	103	LF	$	$
42	MH, 60" Dia., 0-6' Deep, complete in place, including frame, cover, vent, and testing	37	37	$	$
43	MH, 60", Extra Depth, Over 6' Deep, complete in place	430	LF	$	$
44	MH, 72" Dia, 0-6' Deep, complete in place	15	EA	$	$
45	MH, 72", Extra Depth, Over 6' Deep, complete in place.	212	VF	$	$
46	MH, 84" Dia, 0-6' Deep, complete in place	5	EA	$	$
47	MH, 84", Extra Depth, Over 6' Deep, complete in place.	48	EA	$	$
48	Internal Manhole Drop Connection MH CC-025	10	VF	$	$
49	Manhole Removal and Replacement MH CC 016.1	15.3	VF	$	$
50	Hand Excav. Within 5 ft. & Support Gas Pipe Lines > 12", per location	6	EA	$	$
51	Benched Excavation MH CC-045 to CC-044	435	LF	$	$
52	Trench Paving, Complete in Place	5,500	SY	$	$
53	Temporary Gravel Road including 18" culvert	4,533	SY	$	$
53A	Sodding of Temporary Gravel Road Area	4,533	SY	$	$
54	Paving Overlay	9,115	SY	$	$
55	Access Driveway off of US Hwy 70 including 24" culvert	193	SY	$	$
56	Bore with 54" Steel Casing,complete in place, including restrained GRP SN 72 pipe w/testing	300	LF	$	$
57	Hwy Xing #1, complete in place. Bore w/54" Steel Casing, incl. restrained GRP SN 72pipe w/testing	123	LF	$	$
58	RR Xing #1, complete in place, Bore w/60" Steel Casing, incl. restrained DIP Class 53 pipe w/testing	120	LF	$	$
59	WWC1 Suspended Pipe Diversion complete in place, excluding pipe	20	LF	$	$
60	Stream Crossing #1, complete in place, including 42" SN 72 GRP conc. encased w/ testing	75	LF	$	$
61	Stream Crossing #1.1, complete in place, including 24" SN 72 GRP conc. encased w/ testing	100	LF	$	$
62	Stream Crossing #2, complete in place, including 42" SN 72 GRP conc. encased w/ testing	125	LF	$	$
63	Memphis Arlington Road and Stream Crossing #3, complete in place, incl. 42" SN 72 GRP conc. encased w/testing	149	LF	$	$
64	Stream Crossing #4, complete in place, including 42" SN 72 GRP conc. encased w/ testing	120	LF	$	$
65	Stream Crossing #4.1, complete in place, including 18" DR 21 C900 conc. encased w/ testing	100	LF	$	$
66	Trench plugs	78	CY	$	$
67	Dewatering	19,440	LF	$	$
68	Overexcavation if required as directed by the City	9,000	CY	$	$
69	Flowable Fill, if required, as directed by the City	1,000	CY	$	$
70	Stone AASHTO 57 if required, as directed by the City	3,000	CY	$	$
71	Stone TDOT 303.01, if required, as directed by the City	3,000	CY	$	$
72	Stone AASHTO #8, if required, as directed by the City	3,000	CY	$	$
73	Suitable Backfill, if required, as directed by the City	3,500	CY	$	$
74	Sand, if required, as directed by the City	100	Ton	$	$
75	Post construction sewer televising	1	LS	$	$
76	Temporary construction exit	8	EA	$	$
77	ALLOWANCE FOR 3RD PARTY TESTING	1	LS		$250,000.00
	TOTAL BID SCHEDULE A INCLUDING PROJECT ALLOWANCE: $				

Total Base Bid including Project Allowance: _____

_____Dollars ($ _____).

SECTION 01650

MEASUREMENT AND PAYMENT PROCEDURES

PART 1 – Description.

All work completed under this Contract will be measured by the Engineer according to the bid items and to the construction drawings. Units of measurement and dimensions will be shown in these specifications.

1.01 Payment

A. Progress payments will be processed in accordance with the following schedule.

Cut-Off Date	Date of Submittal
**	**

Submit pay requests to the City by the dates of submittal listed above.
**Dates will be established at the Preconstruction Conference.

B. Owner will make progress payments as defined in Article 5 of the Agreement, on the forms provided by the Engineer.

C. If the Contractor elects to enter into a joint account agreement, two (2) pay requests and vouchers must be submitted. One pay request and voucher for the appropriate progress payment amount, the other for the retained amount.

D. Payment will be made for the work completed and stored materials less retained amounts in accordance with provisions of the contract documents.

E. Payment amounts will be based on the scheduled values and mutually agreed upon percentage of completion for each item.

F. Work completed under this Contract will be measured by the Engineer according to the bid items and construction drawings. The cost of all material and labor required to complete this project as specified and shown on the drawings, but not specifically included as a pay item shall be included in the bid prices of its related bid item(s). No extra pay shall be granted for items that are reasonably foreseen as necessary for the proper installation of an items.

G. The Contractor will receive and accept compensation provided for in the Contract as full payment for furnishing all materials, labor, tools, and equipment and for performing all Work under the Contract in a complete and acceptable manner and for all risk, loss,

damage, or expense of whatever character arising out of the nature of the Work or the execution thereof, subject to the provisions of the General Conditions.

H. If any unit price in the Bid Schedule requires that the said unit price cover and be considered compensation for certain work or material essential to the item, this same work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Specifications.

1.02 Measurement of Quantities

Quantities shown on the bid schedule are estimated and are to be considered approximate. Actual constructed quantities will vary. The Contractor will be compensated only for those items and materials actually installed and approved as part of the project. No additional pay will be granted for items or materials not installed.

A. Work completed under the Contract shall be measured by the Engineer according to the standards of weights and measures recognized by the U.S. Bureau of Standards.

B. The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the Contract will be those methods generally recognized as conforming to good engineering practice.

C. Unless otherwise specified, measurements for area computations will be made on the surface. Pay measurements for area computations will not exceed the neat dimensions shown on the Contract Drawings, unless otherwise ordered in writing by the Engineer.

D. Structures will be measured according to neat lines shown on the Contract Drawings or as altered to fit field conditions. No payment will be made for length, width, or depth, in excess of that shown on the Contract Drawings or specified in the Specifications for any construction, unless otherwise approved by the Engineer in writing.

E. Items which are measured by the linear foot, such as pipe, will be measured parallel to the base or foundation upon which such items are placed, unless otherwise shown on the Contract Drawings or specified.

F. In computing volumes of excavation, the average end area method based on horizontal measurements, or other acceptable methods, will be used.

G. The term "each", when used as an item of payment, will mean complete payment for the Work described in the Contract.

H. The term "lump sum", when used as an item of payment, will mean complete payment for the Work described in the Contract, including all necessary fittings and accessories.

I. The term "complete in place", means the completion of the Contract item or portions thereof as determined by the Engineer including the furnishing of all materials, equipment, tools, labor, and work incident thereto, unless otherwise specified.

J. The term “complete in place”, means the completion of the Contract item or portions thereof as determined by the Engineer including the furnishing of all materials, equipment, tools, labor, and work incident thereto, unless otherwise specified.

1.03 Bid Item Descriptions

The cost of all material and labor required to complete this project as specified and shown on the drawings but not specifically included as a pay item, shall be included in the bid price of its related item. No extra pay shall be granted for items that are reasonably foreseen as necessary for the proper installation of an item.

No additional payment shall be made for the following activities or items. All costs associated with these activities or items shall be included in the unit prices bid.

MOBILIZATION AND DEMOBILIZATION – N/A - ADDED TO BID ITEMS

DUST CONTROL INCLUDING PROVISION OF WATER

A. No measurement will be made.

B. No additional payment will be made. All costs for dust control including the provision of water to achieve dust control shall be included in the unit price(s) bid.

NON-PERIMETER EROSION AND SEDIMENT CONTROL (EPSC) MEASURES

A. No measurement will be made.

B. No additional payment will be made. All costs for non-perimeter sediment and erosion control measures as shown on the drawings shall be included in the unit bid price(s) for items requiring these control measures. This includes all activities associated with the Stormwater Pollution Prevention Plan and those necessary to remain compliant with applicable permits.

Temporary Construction Exits (Bid Item 76) and perimeter EPSC measures (Bid Item B) will be paid under the designated bid item.

TRAFFIC CONTROL

A. No measurement will be made.

B. No additional payment will be made. All costs for traffic control shall be included in the appropriate unit price(s) bid.

CLEARING AND GRUBBING – N/A ADDED TO BID ITEMS

EXCAVATION FOR STRUCTURES OR SEWERS

A. No measurement will be made.

B. No additional payment will be made. All costs for excavation for structures will be included in the bid price for items requiring excavation.

PIPE BEDDING

A. No measurement will be made.

B. No additional payment will be made. All costs for pipe bedding shall be included in the unit price bid for gravity sewer and lateral pipelines.

FINISH GRADING AND SEEDING

A. No measurement will be made.

B. No additional payment will be made. All costs for finish grading, seeding and shall be included in the unit price(s) bid for items requiring finish grading and seeding.

SODDING

B. No measurement will be made with the exception of the provision of sodding along Chapel Hill Road and Chambers Chapel Road.

C. No additional payment will be made for Sodding with the exception of the provision of sodding along Chapel Hill Road and Chambers Chapel Road. All other costs for sodding shall be included in the unit price bid categories requiring sodding including stream crossings (Bid Items 60 through 65) and the access driveway (Bid Item 55).

PRE- AND POST-CONSTRUCTION VIDEO TAPE DOCUMENTATION

A. No measurement will be made.

B. All costs related to pre-and post-construction video tape documentation shall be included in the mobilization / demobilization bid.

FENCING AND GATE REPLACEMENT

A. No measurement will be made.

B. All costs related to removing, disposal, and replacing in kind fencing along the sewer alignment shall be included in the unit price(s) bid for gravity sewer pipelines. And for the work at the WWTP.

PROVISION OF GEOTECHNICAL ENGINEER

A. No measurement will be made.

B All costs related to the provision of a Geotechnical Engineer shall be included in the unit prices for work requiring observation by the Geotechnical Engineer.

PART 3 Execution

3.01 Measurement and Payment of Bid Items

MOBILIZATION AND DEMOBILIZATION (BID ITEM A)

A. No measurement will be made

B. Payment for mobilization/ demobilization will be made at the lump sum price and includes start-up costs, mobilization of equipment to the project site and pre- and post-construction videos. It also includes removal of all equipment from the project site and final clean-up. The project also includes the provision, installation, relocation, and maintenance of project signs.

The cost for mobilization shall not exceed 5% of the Total Base Bid.

The Owner will pay 40% of the mobilization cost with the Contractor's first partial payment request. The Owner will pay the remaining mobilization cost after the Contractor mobilizes equipment to the site and the pre-construction video has been accepted.

PERIMETER EPSC MEASURES (BID ITEM B)

A. Measurement will be made along the centerline of the sewer alignment to determine the percent complete of Perimeter EPSC measures.

The length of sewer will exclude sewer in paving and will include all sewer spurs. The total length to determine percent complete will be established during construction.

B. Payment for perimeter EPSC measures will be paid at the lump sum price for Perimeter EPSC measures that have been installed along the sewer alignment. Perimeter EPSC measures on both sides of the sewer alignment must be installed and approved prior to

measurement or payment and include high visibility fence, silt fence, silt fence with backing, and outfalls.

The work includes maintenance of all Perimeter EPSC measures including placing additional rock, cleaning, replacing damaged materials, and complying with SWPPP requirements until measures are approved for removal.

The work includes removal of perimeter EPSC measures.

Once the percent of perimeter EPSC measures installed has been determined, 70% of that amount will be paid. The remaining 30% of perimeter EPSC measures installed will be paid upon completion of final grading and seeding.

Additional EPSC measures as may be required during the construction of the project will be paid under other bid items requiring additional EPSC measures.

CLEARING AND GRUBBING (BID ITEM B)

A. Measurement will be made along the centerline of the sewer alignment to determine the percent complete of clearing and grubbing.

   The length of sewer will exclude sewer in paving and will include all sewer spurs. The total length to determine percent complete will be established during construction.

B. Payment for clearing and grubbing will be paid at the lump sum price for the percent of the area that has been cleared and grubbed and has been satisfactorily stabilized in advance of sewer construction.

   Clearing and grubbing may not proceed until perimeter EPSC measures are installed. Payment for installation and maintenance of perimeter EPSC measures is not included in this item.

   Payment includes maintaining stabilized areas including but not limited to watering and placement of additional mulch and seed to ensure a stabilized site.

   Payment includes removal and disposal of remaining mulch materials within the area of trench excavation prior to commencing trench excavation.

PUMP STATION DEMOLITION AND WET WELL CONVERSION (Bid Items 1 and 2)

A. No measurement will be made.

B. Payment for the pump station demolition and wet well conversion will be made at the lump sum price bid for the designated pump station site, complete in place, as specified

and indicated on the Contract Drawings. The lump sum price bid will be full payment for the removal of the lift station and appurtenances and site work including, but not limited to, removal and disposal and/or salvage of existing equipment, fence, storm pipe and headwalls, non-perimeter EPSC measures, driveway removal, filling openings, coating and conversion of the wet well into a manhole, bypass pumping, excavation, dewatering, backfill, site restoration, finish grading and seeding of pump station site and access driveway.

WELLHOUSE REMOVAL AND WELL ABANDONMENT (Bid Item 3)

A. No measurement will be made.

B. Payment for well house removal and disposal and well abandonment by a licensed water well Contractor in accordance with State Standards will be made at the lump sum price bid. Payment will include removing and disposing of well house structure, slab, and well appurtenances, filling open bore hole with grout, removing well casing, backfill, surface restoration and all incidental work to make the job complete.

Work includes securing and/or supporting bore hole at the bottom of excavation during construction and installation of gravity sewer.

SCOTT'S CREEK WASTEWATER TREATMENT PLANT (WWTP) INFLUENT WET WELL CONSTRUCTION AND ANCILLARY WORK AT WWTP SITE (Bid Item 4)

A. No measurement will be made

B. Payment for the construction of the new connection to the influent wet well at the Scott's Creek WWTP will be made at the lump sum price bid for the new connection complete in place as specified and indicated on the Contract Drawings. The Lump sum price bid will be full payment for the completed work including, but not limited to work in the WWTP wet well through and including installation of pipe between MH CC-001 and wet well and MH CC-001, reroute of plant internal flow piping, bypass pumping for incoming flows and for station flows, excavation, excavation support, dewatering, wet well wall thickening, core drill opening, backfill, utility support, hand excavation at electrical conduits, pipe removal and disposal, compaction and site restoration, finish grading and seeding.

The work also includes pipe installation from the influent wet well to MH CC-001 complete in place includes pipe, excavation, trench support, geotextile fabric, stone bedding, backfill, detectable marking tape, compaction, deflection testing, leakage testing, restoration of unpaved surfaces.

The work includes installation of MH CC-001, complete in place including, excavation, excavation support, manhole sections, joint connections, manhole lining, encapsulation, exterior coating, anti-floatation collar, crushed stone subbase, geotextile, backfill,

compaction, pipe connections, including internal drop connection, frame, cover, steps, and vacuum testing.

The work includes installation and maintenance, and removal of non-perimeter EPSC measures at the WWTP.

The work also includes the provision and installation of duckbill valve in MH CC-002.

The work includes the maintenance of access to the WWTP during all construction at the WWTP site (extending through installation of MH CC-003).

The work includes removal and reinstallation of fencing and rolling gate at WWTP and provision of temporary fencing.

The work also includes the provision and installation of chain link fence and swing gate at the WWTP east property line.

No additional payment will be made for dewatering during work from the influent wet well to and including MH-CC-001.

The work excludes installation of gravity sewer and manholes upstream of MH C-001 which will be paid under other bid items.

The work excludes remove and replace existing storm pipe between MH CC-002 and CC-003.

Payment will not be made until completion of testing and acceptance by the Engineer.

REMOVE AND REPLACE STORM PIPES (Bid Items 5, 6, and 7)

A. Measurement for payment of removal and replacement of storm pipelines of each size and type indicated will be made end of pipeline to end of pipeline horizontal lengths indicated on the approved grade sheets will be the only basis for payment.

B. Payment for removal and replacement of storm pipelines will be made at the unit price bid per linear foot for each size and depth complete in place, including removal, disposal, installation, maintenance, and removal of additional non-perimeter EPSC measures, pipe, headwalls, excavation, trench support, stone bedding, backfill - either native material or stone (as indicated on the drawings), compaction, and restoration of unpaved surfaces. The work also includes reinstallation of restrictor on new headwall.

GRAVITY SEWER PIPELINES (Bid Items 8-34)

B. Measurement for payment of gravity sewer pipelines of each size and type and at the depths indicated will be made from center to center of manholes. Horizontal lengths indicated on the approved grade sheets will be the only basis for payment.

The measurement will not include carrier (gravity sewer pipeline) pipes within casing pipes and the length of casing pipe will be deducted from the length between manholes.

The measurement will not include gravity sewer pipelines designated for concrete encasement and will be deducted from the length between manholes.

B. Payment for gravity pipelines will be made at the unit price bid per linear foot for each size and depth complete in place, including pipe, installation, maintenance, and removal of non-perimeter EPSC measures, excavation, trench support, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, compaction, deflection testing, leakage testing, restoration of unpaved surfaces including finish grading and seeding.

Payment depth will be from existing grade to pipe invert as shown on the approved grade sheets. No additional payment will be made when the Contractor excavates by error or intent beyond the required depth.

Payment will not be made until deflection and/or robotic laser testing and leakage testing has been completed and accepted by the Engineer and until compaction tests are completed and accepted.

If service laterals and mainline are not tested simultaneously for payment, the Contractor will be required to perform an additional leakage test after the service laterals are installed at no additional cost.

Where pipeline installation is specified to be in paving, work under this pay item includes traffic control during installation.

Where pipeline is installed in wetland areas, the work includes removing and staging topsoil, placing staged topsoil after construction and finish grading and seeding with wetland seed mix.

Where trench crosses gas or water service lines, this work includes locating and protecting service lines during construction.

SANITARY SEWER SERVICE LATERALS & CONNECTION TO 18” MAIN (Bid Item 35)

A. Measurement for payment of sanitary sewer laterals that connect to the gravity sewer pipeline of each size and type and at the depths indicated will be made from center of the property cleanout to the centerline of the sewer main at the wye connection along the path of the gravity lateral.

Depth will be determined based on the invert of the lateral where the lateral connects to the sewer main. If a deep lateral connection is made, depth will be determined based on the invert of the lateral where it connects to the riser pipe.

B. Payment will be made for sanitary sewer service laterals at the unit price for each size and depth including pipe, fittings, wye connections, cleanout, installation, maintenance, and removal of non-perimeter EPSC measures, excavation, trench support, geotextile fabric, stone bedding, backfill either native material or stone (as indicated on the drawings), detectable marking tape, deflection, compaction, leakage testing, and restoration of unpaved surfaces including finish grading seeding.

Where connection to a deep lateral is made, payment is in addition to the deep lateral riser.

Payment will not be made until deflection and leakage testing has been completed and accepted by the Engineer and until compaction tests are completed and accepted.

Work under this item includes traffic control as required.

SANITARY SEWER SERVICE LATERALS AND CONNECTION TO SANITARY MANHOLE (Bid Items 36-38)

A. Measurement for payment of sanitary sewer laterals that connect to a manhole of each size and type and at the depths indicated will be made from center of the property cleanout to the centerline of the sewer manhole along the path of the gravity lateral.

B. Payment will be made for sanitary sewer service laterals at the unit price for each size and depth including pipe, fittings, wye connections, cleanout, manhole to pipe connection, drop bowl, pipe, and fittings, installation, maintenance, and removal of non-perimeter EPSC measures, excavation, trench support, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, deflection, compaction, leakage testing, and restoration of unpaved surfaces including finish grading and seeding.

Payment will not be made until leakage testing has been completed and accepted by the Engineer and until compaction tests are completed and accepted.

Work under this item includes traffic control where required.

6” PVC DEEP LATERAL RISER PIPE CONNECTION (Bid Item 39)

A. Measurement for deep lateral riser pipe connection will be from the invert of the wye connection to the riser pipe to the invert of the sewer main at the point of connection.

B. Payment for deep lateral riser pipe connection is in addition to sanitary sewer laterals and connection to 18" main and will be at the unit price bid for each vertical foot of depth complete in place in accordance with the details including pipe, fittings, wye connections, cleanout, concrete, sonotube, excavation, trench support, geotextile fabric, stone bedding, stone backfill, deflection, compaction, and leakage testing.

Work under this item includes traffic control where required.

The work excludes connection to the 18" main and restoration of surfaces which is paid under other bid items.

Payment will not be made until completion of testing and acceptance of the entire service lateral by the Engineer

MANHOLES (MH) (Bid Items 40-47)

A. Measurement for manholes will be from the elevation of the manhole invert at the lowest point in the channel to the elevation of the existing ground at the centerline of the manhole previous to the start of the work, unless a higher elevation is indicated on the Contract Drawings.

B. Payment for manholes of the various types and diameters will be at the unit price bid, each and as described on the details. Unit price bid will be full payment for complete manholes including, excavation, excavation support, manholes sections, lining where specified, encapsulation, exterior coating, anti-floatation collar, crushed stone subbase, geotextile, backfill, compaction, pipe connections (excluding drop connections), frame, cover, steps, gooseneck vent pipe, and vacuum testing, and is in addition to payment for pipeline.

Payment for manholes will include any installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding required that extends beyond what is required for pipeline installation.

Payment includes pipe to MH connection of different pipe diameters where the crown elevation is matched at the manhole.

Payment will not be made until completion of testing and acceptance by the Engineer.

Payment for manholes 6-feet deep and under, and the first 6 feet of manholes over 6-feet deep will be at the unit price bid, each, complete in place.

Payment for depth over 6 feet shall be at the unit price bid per vertical foot, complete in place. Payment will be in addition to the payment granted for the first 6 feet of manhole.

INTERNAL MANHOLE DROP CONNECTION MH CC-025 (Bid Item 48)

A. Measurement for internal manhole drop connections will be based on the vertical distance from the manhole invert at the centerline to the invert of the upper pipe as shown on the approved grade sheets.

B. Payment for manhole drop connections shall be at the unit price bid per vertical foot for drop connection. The unit price bid shall be complete payment for drop connections regardless of size and type including pipe, drop bowl fittings and anchoring.

Payment for drop connections is in addition to the amount paid for manholes.

No payment will be made for internal drop connection of service laterals into manholes. Internal drop connection of service laterals into manholes is included with the unit bid prices for service laterals.

MANHOLE REMOVAL AND REPLACEMENT MH CC-016.1 (Bid Item 49)

A. Measurement for the removal and replacement of MH CC-016.1 shall be based on the elevation of the manhole invert at the lowest point in the channel to the elevation at the top of the manhole cover at the centerline of the manhole previous to the start of the work.

B. Payment for the removal and replacement of MH CC-016.01 shall be at the unit price bid per vertical foot, complete in place. Unit price bid will be full payment for complete manhole replacement including, removal, disposal, excavation, excavation support, manhole sections, manhole joints, anti-floatation collar, geotextile crushed stone subbase, backfill, compaction, pipe connections (including external drop connections), lining, encapsulation, exterior coating, frame, cover, steps, gooseneck vent pipe, and vacuum testing, and is in addition to payment for pipeline.

Payment also includes bypass pumping of existing wastewater flows, connection of 18” diameter and 15” diameter sewers, jet cleaning of 18” diameter sewer for 1 manhole length and duckbill valve in 18” pipe.

Payment for manhole removal and replacement will include any installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding required that extends beyond what is required for pipeline installation.

Payment will not be made until completion of testing and acceptance by the Engineer.

HAND EXCAVATION WITHIN 5 LF AND SUPPORT GAS PIPELINES GREATER THAN 12 INCH DIAMETER (Bid Item 50)

A. No measurement will be made

B. Payment will be made in accordance with the unit price bid per location where hand excavation within 5 foot proximity of natural gas utility pipeline that is greater than 12 inches in diameter is required by the utility. Payment includes probing and locating utility pipeline, hand excavation to fully expose entire utility and support and protection of utility pipeline as required during excavation, installation of sanitary sewer pipeline, backfill, and compaction.

   Payment for exposure, support, and/or protection of other utilities and natural gas lines less than 12 inches in diameter will not be made and all costs will be included in the unit price bid for gravity sewer pipelines and laterals.

BENCHED EXCAVATION MH CC-045 TO CC-044 (Bid Item 51)

A. Benched excavation between MH CC-045 and CC-044 shall be measured by the horizontal length along the horizontal alignment of the sanitary sewer from manhole to manhole.

B. Payment for benched excavation where necessary between MH CC-045 and MH CC-044 shall be made in accordance with the unit price bid per LF complete in place and shall include, excavation, excavation support, backfill, compaction and restoration of surface.

   Payment for benched excavation will include any installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding required that extends beyond what is required for pipeline installation.

TRENCH PAVING (Bid Item 52)

A. Measurement for trench paving over pipe trenches shall be the number of square yards in place and approved. Measurement shall be made on the surface of the finished paving taken from the lines formed at the junction of the old and new asphalt.

B. Payment for trench paving over pipe trenches will be made at the unit bid price per square yard, complete in place, including saw cutting, removal and disposal of existing asphalt pavement, installation of base material, grading, compaction, and pavement of the trenched area. Refer to Typical Pavement Repair Detail.

   Work under this item includes traffic control as required.

TEMPORARY GRAVEL ROAD AND CULVERTS (Bid Item 53)

A. Measurement for temporary gravel road shall be the number of square yards in place and approved. Measurement shall be made on the level surface of the finished temporary gravel road where the full depth of stone is in place.

B. Payment for temporary gravel road shall be made at the unit price per square yard complete in place including site preparation, installation of temporary culverts (including 36" culvert and 18" culvert were indicated), placement of stone, compaction, grading to create a level driving surface, road maintenance including placement of additional gravel and culvert replacement as required or directed by the Engineer, removal and disposal of gravel and culverts, and site restoration including driveway repairs and swale restoration.

The work also includes the placement and removal of jersey barriers with reflectors, marking fire hydrants with lighted barriers and the relocation or provision of temporary mailboxes and final restoration of mailboxes and installation of new brick mailboxes.

Work under this item includes traffic control as required.

Work under this time includes any additional installation, maintenance, and removal of non-perimeter EPSC measures.

SODDING OF TEMPORARY GRAVEL ROAD AREA (Bid Item 53A)

A. Measurement for sodding shall be the number of square yards placed after removal of temporary gravel road and culverts (Bid Item 53)

Measurement will be same as square yards measured for temporary gravel road and culverts. (Bid Item 53).

B. Payment for sod placed will be made at the unit price per square yard complete in place including site preparation, placement of topsoil, installation, watering, and maintenance.

Payment will be made after the installation is approved by the Owner.

Payment includes watering and maintenance of sod through final completion of the project.

No additional payment will be made for sod placed as a result of areas damaged by vehicles or other equipment operating beyond the limits of the designated gravel driveway.

PAVEMENT OVERLAY (Item 54)

A. Measurement for pavement overlay shall be the number of square yards in place and approved. Measurement shall be made on the surface of the finished paved surface.

B. Payment for pavement overlay will be made at the unit bid price per square yard, complete in place, including cleaning and preparing the road surface for overlay and re-pavement of the surface. Refer to note 4 on C-001 and C-002.

Work under this item includes traffic control as required.

ACCESS DRIVEWAY OFF OF US HIGHWAY 70 (Bid Item 55)

A. Measurement for access driveway off of US Highway 70 shall be the number of square yards of driveway placed.

B. Payment for access driveway off of US Highway 70 shall be made at the unit price per square yard complete in place including site preparation, installation of base material, grading and compaction and surface paving.

Payment also includes provision and installation of pipe culvert and side drains, new gate, traffic control, installation, maintenance, and removal of non-perimeter EPSC measures, and site restoration including finish grading and seeding, placement and maintenance of sod 3 feet beyond all paved surfaces.

BORING/JACKING – HIGHWAY CROSSINGS, RAILROAD CROSSINGS, OTHER BORED CROSSINGS (Bid Items 56, 57, and 58)

A. Measurement of bored highway crossings, railroad crossings, and other bored crossings will be along the centerline of the pipeline for the length between the ends of the casing pipe as shown on the Contract Drawings.

B. Payment for bored highway crossings, railroad crossings, or other bored crossings will be made at the unit price bid per linear foot for each crossing, complete in place. Payment shall include boring pits, dewatering, restrained carrier pipe, casing pipe, excavation, backfill, grouting voids, filling annular space, sealing pipe ends, and all other work incidental to the bored crossing.

Payment includes coordination with and payment of Railroad flaggers and traffic control as required.

Payment includes track settlement monitoring for Railroad crossings.

Payment for the manholes on either side of the crossing will be paid separately at the unit price for Manholes.

Payment for the pipe extending beyond the casing pipe between manholes will be paid separately at the unit price for gravity sewer pipelines.

C. If it becomes impossible to complete the boring, the Contractor will discontinue the boring and obtain approval from the Engineer for an alternate method of accomplishing the crossing. Payment will be made for work already completed at the unit price bid per

linear foot. This payment will be in addition to payment granted for the alternate method selected to complete the crossing.

WET WEATHER CONVEYANCE CROSSING #1 (Bid Item 59)

A. Measurement of wet weather conveyance crossing #1 will be the horizontal projection along the centerline of the pipe from top of bank to top of bank as shown on the Contract Drawings.

B. Payment for wet weather conveyance (WWC) crossing #1 will be made at the lump sum price for the crossing, complete in place. Payment will include excavation, backfill, suspended pipe diversion, site stabilization and restoration.

Payment will not be made for WWC crossings other that WWC#1.

Payment for gravity sewer installation will be paid separately at the unit price for gravity sewer pipelines.

The work includes installation, maintenance, and removal of non-perimeter EPSC measures, and finish grading and seeding.

STREAM CROSSINGS STR-1, STR-1.1, STR-2, STR-4, AND STR-4.1 (Bid Items 60, 61, 62, 64, and 65)

A. Measurement of stream crossings will be the length of the concrete encasement at the horizontal projection along the centerline of the pipe.

B. Payment for stream crossings will be made at the unit price per linear foot for each crossing, complete in place. Payment will include pipe, excavation, trench support, concrete encasement, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, compaction, deflection and leakage testing, stream diversion or suspended pipe, temporary or permanent culvert crossing, as required, stabilization restoration of surfaces including finish grading, seeding and sodding site.

The work includes installation, maintenance, and removal of non-perimeter EPSC measures and finish grading and seeding and sodding.

Payment for gravity pipelines for the length of the concrete encasement is included in this pay item.

Payment for trench plugs as required will be paid under the pay item for trench plugs

Payment for manholes will be paid separately at the unit price for manholes.

MEMPHIS ARLINGTON ROAD AND STREAM CROSSING 3 (Bid Items 63)

A. Measurement of Memphis Arlington Road and Stream Crossing 3 will be at the length of the horizontal projection along the centerline of the pipe between MH CC-043 and CC-044.

B. Payment will be made at the unit price per linear foot for the crossing, complete in place. Payment for both road and stream crossing includes: pipe, excavation, trench support, concrete encasement, geotextile fabric, stone bedding, backfill - either native material or stone (as indicated on the drawings), detectable marking tape, compaction, deflection and leakage testing, suspended pipe diversion, temporary, stabilization restoration of surfaces including finish grading, seeding and sodding site.

   The work includes installation, maintenance, and removal of non-perimeter EPSC measures, and finish grading and seeding and sodding.

   Payment for gravity pipelines for the length of the concrete encasement is included in this pay item.

   Where pipeline installation is specified to be in paving, work under this pay item includes traffic control during installation.

   Payment for trench plugs as required will be paid under the pay item for trench plugs

   Payment for manholes will be paid separately at the unit price for manholes.

   Payment for paving, as required, will be paid under the pay items for temporary and permanent paving.

TRENCH PLUGS (Bid Item 66)

A. Measurement will be based on the cubic yard of material placed.

B. Payment for trench plugs will be at the unit price bid for each cubic yard placed where indicated on the drawings and as shown on the detail.

DEWATERING (Bid Item 67)

A. Measurement for payment of dewatering shall be made along the length of gravity sewer from center to center of manholes. Horizontal lengths indicated on the approved grade sheets will be the only basis for payment regardless of the duration that dewatering

activities needed to occur or point of groundwater discharge. No additional payment will be made for dewatering of manholes.

Where dewatering is required at the manhole only, the measurement shall be the diameter of the manhole anti-floatation collar.

B. Payment for dewatering will be made at the unit price bid per linear foot for each length of sewer where dewatering is necessary to maintain groundwater a minimum of 1foot below the bottom of the excavation only in the active work area regardless of size and depth of trench complete in place, including monitoring wells, pumps, piping, appurtenances, discharge filters, stone outfall, removal of system and well abandonment.

C. The work includes installation, maintenance, and removal of non-perimeter EPSC measures and restoration of discharge surfaces including finish grading and seeding.

OVEREXCAVATION - UNSUITABLE BEARING REMOVAL (Bid Item 68)

A. Unsuitable bearing removal when directed by the Engineer will be measured by the three-dimensional method. No measurement will be made for bedding material placed as a result of native material becoming unsuitable due to acts of the Contractor.

B. Payment will be in accordance with the unit price bid per cubic yard for unsuitable bearing removal. Payment will include excavation, removal, and disposal of unsuitable material, placement of geotextile and labor and material used in replacement with specified backfill material.

Specified backfill material will be paid at the unit price for the specified backfill material.

No payment will be made for material placed as a result of native material becoming unsuitable due to acts of the Contractor.

FLOWABLE FILL (Item 69)

A. Measurement will be based on the cubic yard of material placed.

B. Payment will be in accordance with the unit price bid per cubic yard for flowable fill as required as a result of over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for flowable fill placed as a result of native material becoming unsuitable due to acts of the Contractor.

SELECT MATERIAL STONE (Bid Items 70, 71, and 72)

A. Measurement will be based on the cubic yard of material placed.

B. Payment will be in accordance with the unit price bid per cubic yard for select material stone backfill required as a result of directed over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for select material stone backfill placed as a result of native material becoming unsuitable due to acts of the Contractor.

SUITABLE SOIL BACKFILL (Bid Item 73)

A. Measurement will be based on the cubic yard of material placed.

B. Payment will be in accordance with the unit price bid per cubic yard for suitable soil backfill required to be trucked in as a result of over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for suitable soil backfill placed as a result of native material becoming unsuitable due to acts of the Contractor.

SAND (Bid Item 74)

A. Measurement will be based on the ton of material placed.

B. Payment will be in accordance with the unit price bid per cubic yard for sand required to be trucked in as a result of over-excavation or unsuitable material replacement directed by the Engineer.

No payment will be made for suitable soil backfill placed as a result of native material becoming unsuitable due to acts of the Contractor.

POST CONSTRUCTION SEWER TELEVISING (Bid Item 75)

A. No measurement will be made.

B. Payment will be in the lump sum bid price for post construction sewer televising of entire alignment including service laterals. Payment includes all costs associated with sewer televising, including mobilization, demobilization, televising on CD Rom with audio commentary and locator notation for each manhole segment and sewer lateral and written field report.

TEMPORARY CONSTRUCTION EXIT (Bid Item 76)

A. No measurement will be made

B. Payment will be made in the per each unit price and includes site preparation, geotextile, gravel, culvert and sediment trap in accordance with City of Lakeland Standard Detail. 50% payment will be made once the entrance is installed, and the remaining payment will be made once the temporary construction exit has been removed and site has been finished graded and seeded. Additional construction exits as required for the Contractor's haul routes will not be paid.

   Payment includes maintenance of drive including replacement of gravel and installation, maintenance, and removal of EPSC measure including sediment control device.

THIRD PARTY TESTING ALLOWANCE (Bid Item 77)

A. No measurement will be made.

B. Payment will be made in the exact invoice amount of the third-party testing agency for testing required by the Contract Documents.

END OF SECTION

GENERAL NOTES CONTINUED

NATURAL RESOURCES AND SPECIES

1. SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
2. NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
3. INSTREAM EPSC DEVICES REQUIRE A TDEC ARAP PERMIT
4. THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.
5. THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.
6. STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
7. HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.
8. WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.
9. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE CITY OF LAKELAND IMMEDIATELY.
10. NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.

ECOLOGY

11. STAFF FROM THE CITY OF LAKELAND OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN CITY OF LAKELAND OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.
12. STAFF FROM THE CITY OF LAKELAND OR A DESIGNEE SHALL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS THAT MUST BE FOLLOWED.
13. ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

14. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE PROVISION FOR CONSTRUCTION SIGNING AS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD) LATEST EDITION.
15. A COMPLETE TRAFFIC CONTROL PLAN WILL BE SUBMITTED TO THE LAKELAND CITY ENGINEER A MINIMUM OF ONE (1) MONTH PRIOR TO THE START OF CONSTRUCTION OR ROAD CLOSURE.
16. ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
17. IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE CITY OF LAKELAND.
18. A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
19. TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
20. USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE LAKELAND CITY ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE ALTERNATE LOCATIONS AND REQUEST THE LAKELAND CITY ENGINEER'S APPROVAL TO USE THEM.
21. THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE ALTERNATE LOCATIONS AND REQUEST THE LAKELAND CITY ENGINEER'S APPROVAL TO USE THEM.
22. ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED, AND FLEXIBLE DRUMS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.
23. ALL SIGNS WHICH INTERFERE WITH CONSTRUCTION WILL BE RELOCATED OUTSIDE LIMITS OF CONSTRUCTION BY THE CONTRACTOR. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL RESTORE THE SIGNS TO ORIGINAL LOCATION. THE CONTRACTOR SHALL CHECK WITH THE LAKELAND CITY ENGINEER PRIOR TO MOVING ANY PERMANENT SIGNS.
24. ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.
25. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES AND POSTS AS INDICATE ON THE PLANS AND WHERE AND AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN PRICE BID FOR OTHER CONSTRUCTION ITEMS

ROAD CLOSURE

26. NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LAKELAND CITY ENGINEER. ~~CONTRACTOR IS TO REOPEN ANY CLOSED ROAD DURING NO-WORKING HOURS.~~

PAVING

27. THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

PRIVATE DRIVEWAYS, FIELD ENTRANCES, AND BUSINESS ENTRANCES WILL BE RESURFACED A PAVER WIDTH (LANE WIDTH) AS A MINIMUM. A PAVEMENT TAPER TO TRANSITION THE NEW PAVEMENT SHALL BE REQUIRED. THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE LAKELAND CITY ENGINEER. CONCRETE DRIVEWAYS WILL NOT BE PAVED.

DEMOLITION OF BUILDINGS

28. ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT SHALL BE COMPLETED PRIOR TO ANY DEMOLITION ACTIVITIES FOR BUILDINGS INCLUDED IN THE PROJECT. ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

FEMA

30. PORTIONS OF THE PROJECT ARE LOCATED IN A SPECIAL FLOOD AREA AS PER FLOODLINES ESTABLISHED BY FEMA AS SHOWN ON FLOOD INSURANCE RATE MAP 47157C02156G DATED FEBRUARY 6, 2013.

OVERHEAD ELECTRIC EASEMENT

32. WHERE CONSTRICTION CROSSES THE MLGW AND TVA OVERHEAD ELECTRIC EASEMENTS (MH CC-044 TO MH CC-045 AND MH CC-50 TO MH CC-050.1) CONTRACTOR TO BENCH THE EXCAVATION TO FACILITATE WORK BENEATH THE OVERHEAD ELECTRIC LINES.

WELL ABANDONMENT

33. ALL PERMITTING ASSOCIATED WITH WELL ABANDONMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE OBTAINED FROM THE SHELBY COUNTY HEALTH DEPARTMENT (901) 222-9599. WORK MUST BE PERFORMED BY A LICENSED CONTRACTOR.

3

CONTRACTOR MAY CLOSE CHAMBERS CHAPEL ROAD TO THRU-TRAFFIC FOR A PERIOD OF TWO WEEKS. LOCAL TRAFFIC TO UTILIZE TEMPORARY GRAVEL ROAD. CONTRACTOR TO PROVIDE DRIVEWAY ACCESS TO RESIDENTS ON WEST SIDE OF ROAD USING PLATES OR FILLING TRENCHES WITH GRAVEL. IF CONSTRUCTION IS NOT COMPLETED WITHIN TWO WEEKS CONTRACTOR WILL BE REQUIRED TO OPEN ROAD TO THRU-TRAFFIC ON WEEKENDS UNTIL CONSTRUCTION IS COMPLETED. CONTRACTOR WILL BE REQUIRED TO SUBMIT A NEW TRAFFIC CONTROL PLAN TO ALLOW SAFE ACCESS FOR TWO-WAY TRAFFIC ON WEEKENDS.

CONTRACTOR MAY CLOSE CHAPEL HILL ROAD TO THRU TRAFFIC. LOCAL TRAFFIC, INCLUDING RESIDENTS EAST OF THE CUL-DE-SAC, TO UTILIZE TEMPORARY GRAVEL ROAD. CONTRACTOR TO PROVIDE DRIVEWAY ACCESS TO RESIDENTS ON NORTH SIDE OF ROAD AND EAST OF CUL-DE-SAC USING PLATES OR FILLING TRENCHES WITH GRAVEL.

CONTRACTOR MAY NOT CLOSE CHAMBERS CHAPEL ROAD AND CHAPEL HILL ROAD SIMULTANEOUSLY EXCEPT DURING WORK IN THE INTERSECTION.

CONTRACTOR MAY NOT CLOSE EITHER ROAD UNTIL TEMPORARY GRAVEL DRIVE IS INSTALLED AND APPROVED.

SURVEY LEGEND

B-X Boring No.
XUP Utility Pole
XGW Guy Wire
W.M. XWM Water Meter
MB XMB Mail Box
XLW Low Wire Crossing
EIP XIP Iron Pin
G.V. XGV Gas Valve
XSIGN1 Small 1-post Sign
W.V. XWV Water Valve
XFH Fire Hydrant
XFP Fence Post
XPL Property Corner
TEL. PED. XTPED Telephone Pedestal
XTREE Single Tree
XUM Misc. Utility Feature
XMHSAS Sewer Manhole
S.V. XSV Sewer Valve
WELL XWELL Well
XPB Utility Pull Box

PIPE Pipe
36STS 36"Storm Sewer
30STS 30"Storm Sewer
42STS 42"Storm Sewer
EP Edge of Pavement
DR Driveway
RWP Ret. Wall (Private)
PAD Miscellaneous Pad
G GL Gas Line
W WL Water Line
SS SS SANITARY SEWER Line
TOWER Tower
RD Edge of Road
AFLD Athletic Field
FE Field Entrance
TREE Tree Drip Line
POND Pond
FN Fence
T UGT Telephone (UG)
EW End Wall
DIT Paved Ditch
BRI Bridges
BC Building
PK Parking Lot
PL Property Line
CV Culvert
RR RailRoad
CU Curb (Bottom w/BL at Top)
FO FO Fiber Optic

STR Stream
WWC Wet Weather Conveyance
BFE Base Flood Elevation
EP Edge of Pavement
DR Driveway
Wetlands
Wetlands to be Protected

PROPOSED LEGEND

NEW STORM SEWER
NEW STRUCTURES
REMOVE & REPLACE CONC. OR ASPHALT PAVEMENT
TRENCH PLUG

ABBREVIATIONS

ASPH.	ASPHALT
BFE	BASE FLOOD ELEVATION
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
CONST.	CONSTRUCTION
DIA.	DIAMETER
DR.	DRIVEWAY
E	EAST
ELEV, EL	ELEVATION
ESM'T.	EASEMENT
EXIST., EX.	EXISTING
FEMA	FEDERAL EMERGENCY MANAGEMENT AGENCY
GRP	FIBERGLASS REINFORCED PIPE
HORIZ.	HORIZONTAL
INV	INVERT
LF	LINEAR FEET
LT.	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
OS	OFFSET
PPR-TW	POLYPROPYLENE RESIN IMPACT MODIFIED COPOLYMER -TRIPLE WALL EXUDED PIPE (SANITITE-HP)
R/W, ROW	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RD.	ROAD
REQ'D.	REQUIRED
RT.	RIGHT
SAN	SANITARY SEWER
STA.	STATION
STR	STREAM
TBM	TEMPORARY BENCH MARK
TP	TRENCH PLUG
TYP.	TYPICAL
VERT.	VERTICAL
WWC	WET WEATHER CONVEYANCE
WTL	WETLAND

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR SANITARY SEWER PHASE A CITY OF LAKELAND

NO.	REVISION	BY	DATE
3	ADDENDUM 3	DB	02/10/2023

PROJECT NO.: 77202-00
CAD FILE: G-004.DWG
ENGR./ARCH.: DV
DESIGN BY: DV
DRAWN BY: DB
CHECKED BY: DV
DATE: 03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC. DRAWING SHALL NOT BE SCALED.

GENERAL LEGEND & ABBREVIATIONS

DRAWING NO. G-004

NOTES:

1. BOTH GAS AND WATER SERVICE LINES CROSS UNDER THE ROADWAY TO BE FIELD LOCATED AND PROTECTED. ELECTRIC CROSSES THE ROADWAY OVERHEAD. CONTRACTOR TO COORDINATE WITH UTILITY AND PROPERTY OWNER DURING CONSTRUCTION. REFER TO UTILITIES UNDER GENERAL NOTES SHEET G–003.

2. CONTRACTOR TO REPLACE ALL DRIVEWAYS DAMAGED BY CONSTRUCTION TO NEAREST CONSTRUCTION JOINT MATCHING EXISTING MATERIAL. IF ASPHALT DRIVEWAY, REPLACE A MINIMUM OF 20 LF AND ENTIRE WIDTH. SAW CUT AT EDGE.

3. TEMPORARY ACCESS DRIVE INTENDED FOR LOCAL TRAFFIC ONLY. AS CONSTRUCTION IS COMPLETED, CONTRACTOR TO RESTORE PROPERTY AND DITCH TO PREVIOUS GRADE AND SOD PER CITY OF LAKELAND SPECIFICATION.

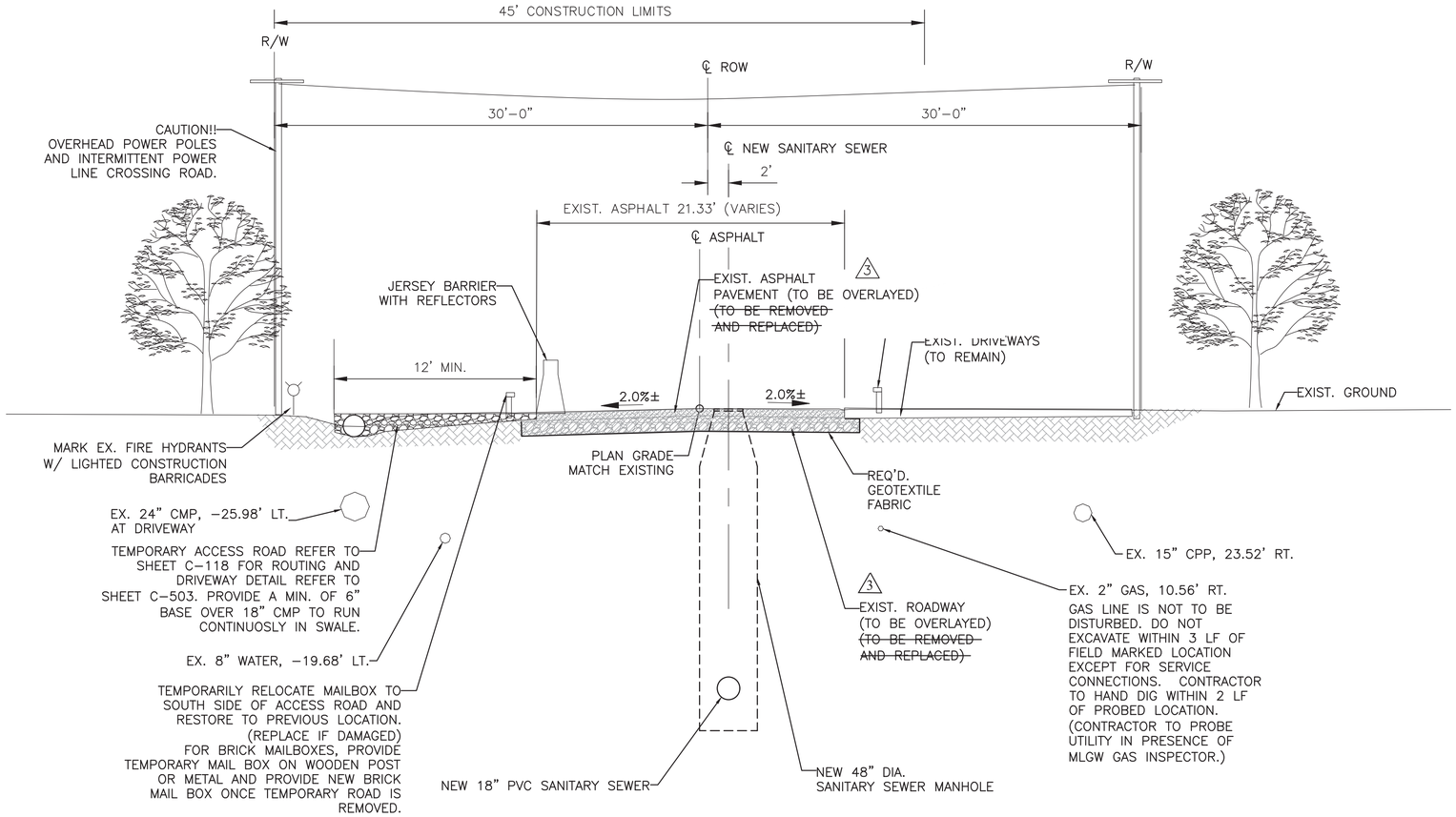
△3 4. ROAD IS INTENDED FOR FULL WIDTH OVERLAY. REFER TO ~~TYPICAL PAVEMENT REPAIR DETAIL (C–502) AND~~ EXISTING ROAD CROSS SECTIONS. PROVIDE 2%± SLOPE. PROVIDE 1½" WEARING COURSE (LAKELAND MIX 1) AND TDOT 403–01 BITUMINOUS MATERIAL FOR TACK COAT AT AN APPLICATION RATE OF 0.1 GAL/SY.

5. CONTRACTOR TO PROTECT FROM DAMAGE AND CLOGGING ANY DRAINPIPES THAT DAYLIGHT IN DRAINAGE SWALES. CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS TO IDENTIFY KNOWN DRAIN PIPE, INVISIBLE FENCE, AND IRRIGATION SYSTEM LOCATIONS PRIOR TO INSTALLATION OF SERVICE CONNECTIONS.

6. JERSEY BARRIERS TO BE PLACED WITH A GAP AT ALL FIRE HYDRANTS TO ALLOW HOSE ACCESS BY THE FIRE DEPARTMENT.

7. CONTRACTOR TO STAKE OUT THE LOCATION OF ALL LATERALS AT A MINIMUM OF TWO WEEKS PRIOR TO INSTALLATION.

△2 8. REFER TO DETAIL 4 ON SHEET C–503 FOR TEMPORARY ACCESS ROAD.



A / C–001 CHAPEL HILL ROAD
STA. 9+45.11
(LOOKING WEST)

NTS

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE
△3	ADDENDUM 3	DB	02/10/2023
△2	ADDENDUM 2	DB	02/03/2023

PROJECT NO.:	77202–00
CAD FILE:	C–001.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

TYPICAL SECTION CHAPEL HILL ROAD

DRAWING NO. C–001

SHEET 7 OF 87

NOTES:

1. BOTH GAS AND WATER SERVICE LINES CROSS UNDER THE ROADWAY TO BE FIELD LOCATED AND PROTECTED. ELECTRIC CROSSES THE ROADWAY OVERHEAD. CONTRACTOR TO COORDINATE WITH UTILITY AND PROPERTY OWNER DURING CONSTRUCTION. REFER TO UTILITIES UNDER GENERAL NOTES SHEET G–003.

2. CONTRACTOR TO REPLACE ALL DRIVEWAYS DAMAGED BY CONSTRUCTION TO NEAREST CONSTRUCTION JOINT MATCHING EXISTING MATERIAL. IF ASPHALT DRIVEWAY, REPLACE A MINIMUM OF 20 LF AND ENTIRE WIDTH. SAW CUT AT EDGE.

3. TEMPORARY ACCESS DRIVE INTENDED FOR LOCAL TRAFFIC ONLY. AS CONSTRUCTION IS COMPLETED, CONTRACTOR TO RESTORE PROPERTY AND DITCH TO PREVIOUS GRADE AND SOD PER CITY OF LAKELAND SPECIFICATION.

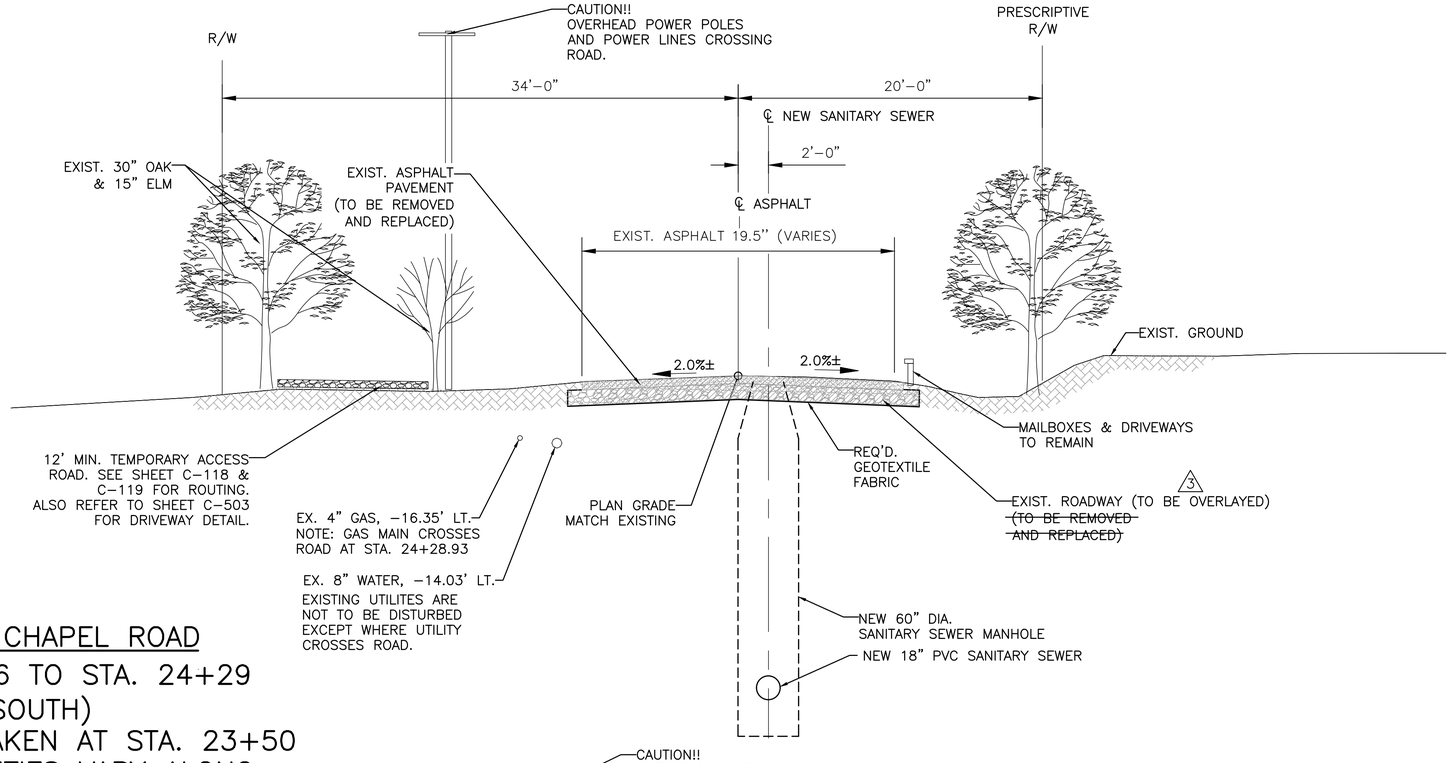
△3 4. ROAD IS INTENDED FOR FULL WIDTH OVERLAY. REFER TO ~~TYPICAL PAVEMENT REPAIR DETAIL (C–502) AND~~ EXISTING ROAD CROSS SECTIONS. PROVIDE 2%± SLOPE. PROVIDE 1½" WEARING COURSE (LAKELAND MIX 1) AND TDOT 403–01 BITUMINOUS MATERIAL FOR TACK COAT AT AN APPLICATION RATE OF 0.1 GAL/SY.

5. CONTRACTOR TO PROTECT FROM DAMAGE AND CLOGGING ANY DRAINPIPES THAT DAYLIGHT IN DRAINAGE SWALES. CONTRACTOR TO COORDINATE WITH PROPERTY OWNERS TO IDENTIFY KNOWN DRAIN PIPE, INVISIBLE FENCE, AND IRRIGATION SYSTEM LOCATIONS PRIOR TO INSTALLATION OF SERVICE CONNECTIONS.

△3 ~~6. JERSEY BARRIERS TO BE PLACED WITH A GAP AT ALL FIRE HYDRANTS TO ALLOW HOSE ACCESS BY THE FIRE DEPARTMENT.~~

7. CONTRACTOR TO STAKE OUT THE LOCATION OF ALL LATERALS AT A MINIMUM OF TWO WEEKS PRIOR TO INSTALLATION.

△2 8. REFER TO DETAIL 4 ON SHEET C–503 FOR TEMPORARY ACCESS ROAD.

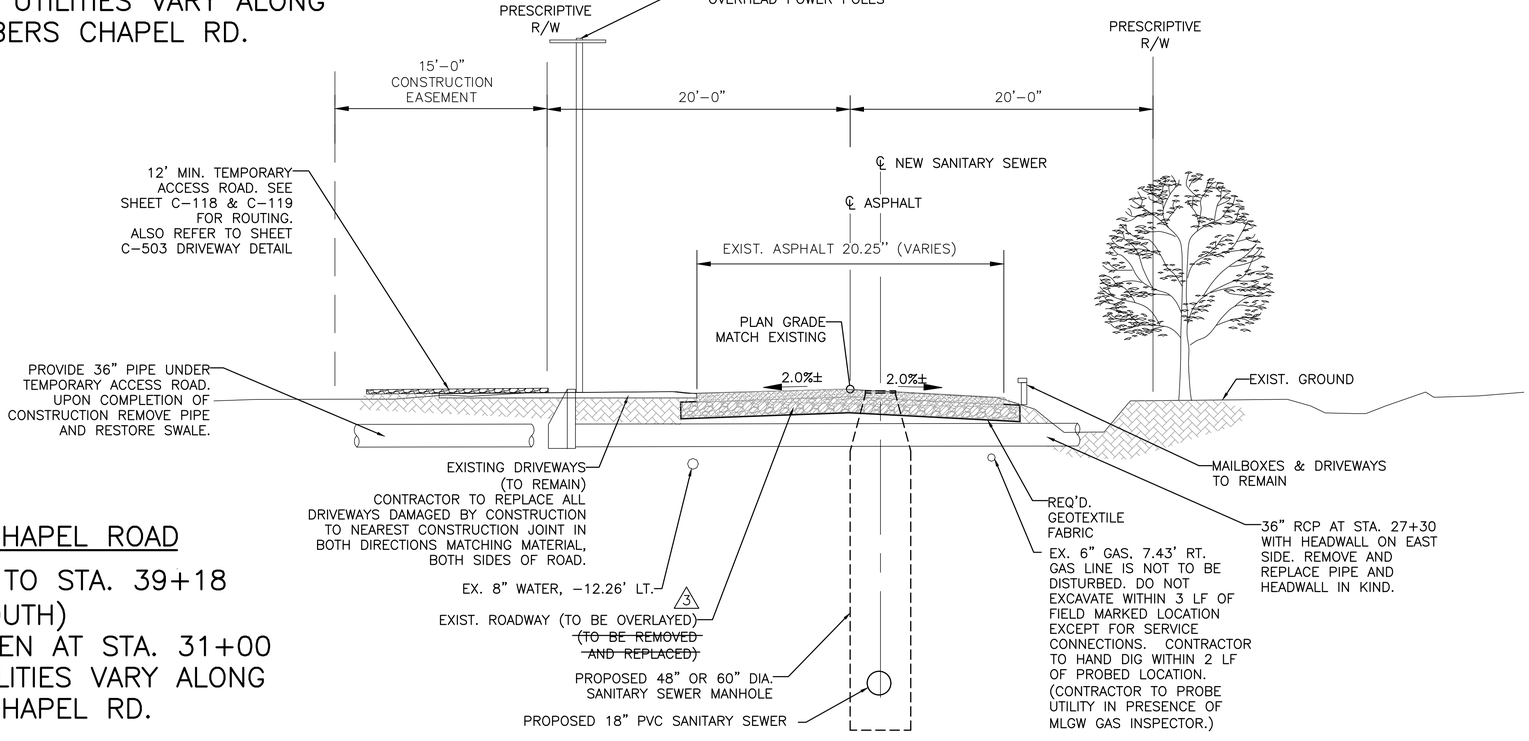


A / C–002

CHAMBERS CHAPEL ROAD

STA. 22+56 TO STA. 24+29
(LOOKING SOUTH)
SECTION TAKEN AT STA. 23+50
EXIST. UTILITIES VARY ALONG CHAMBERS CHAPEL RD.

NTS



B / C–002

CHAMBERS CHAPEL ROAD

STA. 24+29 TO STA. 39+18
(LOOKING SOUTH)
SECTION TAKEN AT STA. 31+00
EXISTING UTILITIES VARY ALONG CHAMBERS CHAPEL RD.

NTS

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE
△3	ADDENDUM 3	DB	10/10/2023
△2	ADDENDUM 2	DB	02/02/2023

PROJECT NO.:	77202–00
CAD FILE:	C–002.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

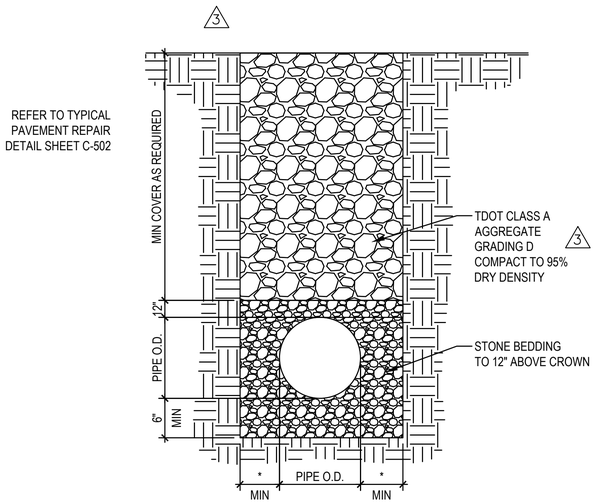
DRAWING INTENT IS TO INDICATE GENERAL ARRANGEMENT, DESIGN AND INTENT OF WORK AND IS PARTLY DIAGRAMMATIC.
DRAWING SHALL NOT BE SCALED.

TYPICAL SECTION CHAMBERS CHAPEL ROAD

DRAWING NO. C–002

SHEET 8 OF 87

J:\PROJ\77202–00\CAD\Exh\Sheet\C–002.dwg 2/9/2023 5:33:25 PM

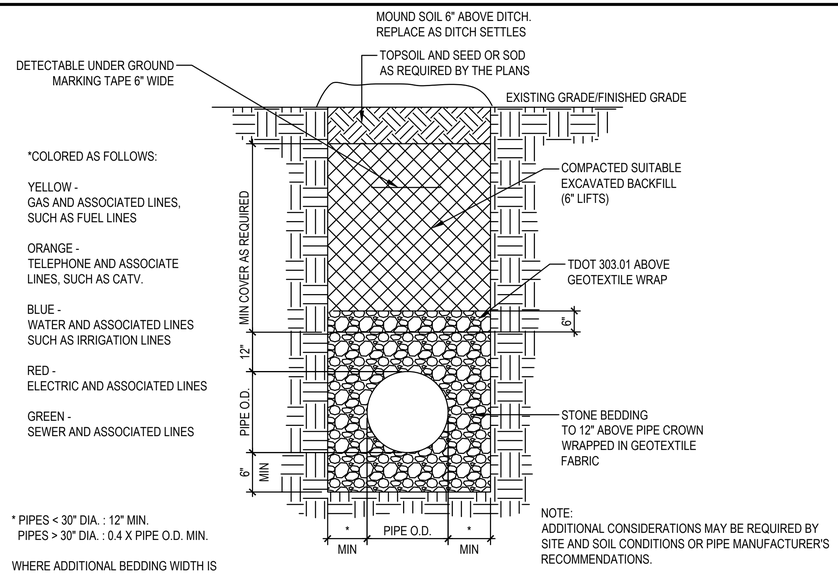


NOTE:
1. ADDITIONAL CONSIDERATIONS MAY BE REQUIRED BY SITE AND SOIL CONDITIONS OR PIPE MANUFACTURER'S RECOMMENDATIONS.

2. WRAP ENTIRE TRENCH IN GEOTEXTILE FABRIC.

1 TYPICAL PIPE/UTILITY CROSSING TRENCH DETAILPAVED AREAS

NOT TO SCALE



*COLORED AS FOLLOWS:

YELLOW -
GAS AND ASSOCIATED LINES, SUCH AS FUEL LINES

ORANGE -
TELEPHONE AND ASSOCIATE LINES, SUCH AS CATV.

BLUE -
WATER AND ASSOCIATED LINES SUCH AS IRRIGATION LINES

RED -
ELECTRIC AND ASSOCIATED LINES

GREEN -
SEWER AND ASSOCIATED LINES

* PIPES < 30" DIA. : 12" MIN.
PIPES > 30" DIA. : 0.4 X PIPE O.D. MIN.

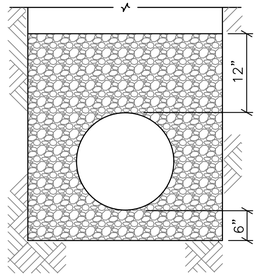
WHERE ADDITIONAL BEDDING WIDTH IS SPECIFIED, PROVIDE 2.2' BEDDING MATERIAL ON EACH SIDE OF PIPE. ALL BEDDING TO BE WRAPPED IN GEOTEXTILE FABRIC.

ALL PIPE WITH ADDITIONAL BEDDING WIDTH SHALL BE SN72.

NOTE:
ADDITIONAL CONSIDERATIONS MAY BE REQUIRED BY SITE AND SOIL CONDITIONS OR PIPE MANUFACTURER'S RECOMMENDATIONS.

2 TYPICAL PIPE/UTILITY CROSSING TRENCH DETAIL NON-PAVEMENT AREAS

NOT TO SCALE



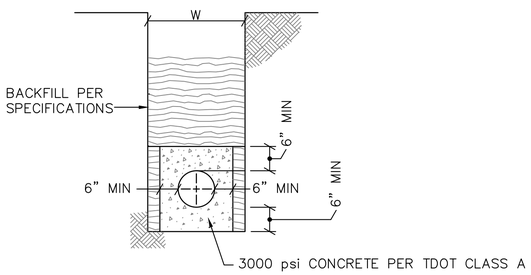
NOTES:

BEDDING

1. TRENCH BOTTOM TO BE FREE OF WATER BEFORE PLACING BEDDING: MAINTAIN WATER LEVEL 1' BELOW BOTTOM OF THE EXCAVATION.
2. SHAPE RECESSES FOR BELL OF PIPE BY HAND.
3. BACKFILL ABOVE BEDDING WITH SPECIFIED BACKFILL MATERIAL.
4. ALL BEDDING TO BE AASHTO #8. FOR PIPES LESS THAN OR EQUAL TO 18" DIAMETER.
5. ALL BEDDING FOR PIPES GREATER THAN 18" DIAMETER TO COMPLY WITH CITY OF LAKELAND BEDDING MIX.

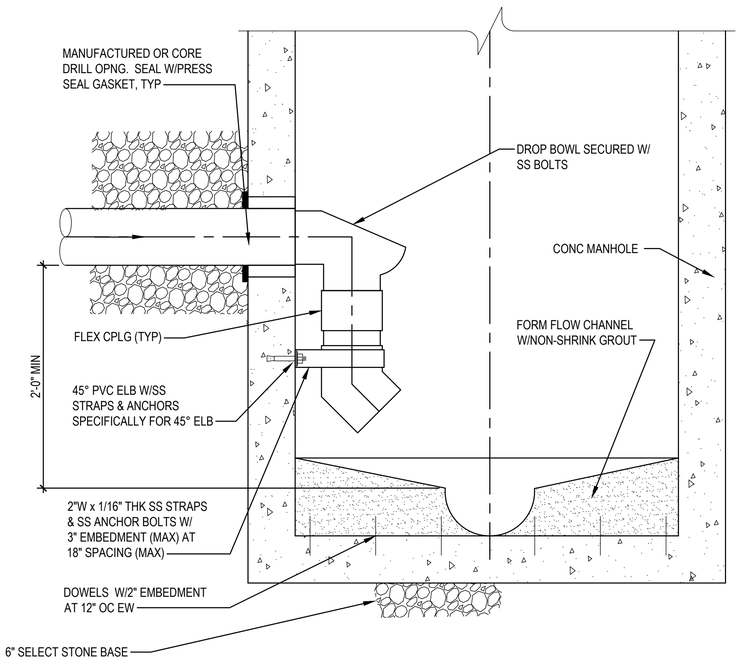
3 TYPE IV BEDDING DETAIL

NOT TO SCALE



4 CONCRETE ENCASEMENT DETAIL

NOT TO SCALE



5 INSIDE DROP MANHOLE W/DROP BOWL DETAIL

NOT TO SCALE

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

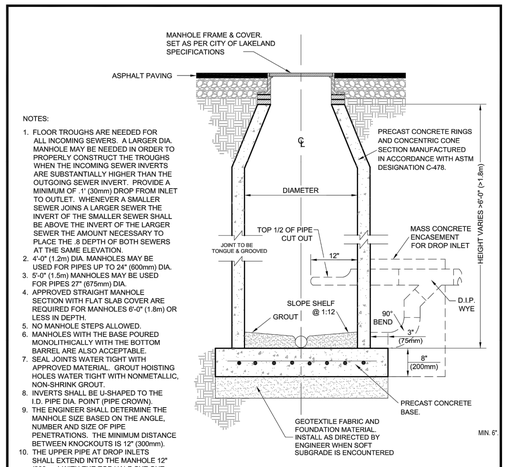
NO.	REVISION	BY	DATE
3	ADDENDUM 3	DB	02/10/2023

PROJECT NO.:	77202-00
CAD FILE:	C-501.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

STANDARD DETAILS

DRAWING NO.
C-501

SHEET 34 OF 87



NOTES:

1. FLOOR TROUGHS ARE NEEDED FOR ALL INCOMING SEWERS. A LARGER DIA. MANHOLE MAY BE NEEDED IN ORDER TO PROPERLY CONSTRUCT THE TROUGHS WHEN THE INCOMING SEWER INVERTS ARE SUBSTANTIALLY HIGHER THAN THE OUTGOING SEWER INVERT. PROVIDE A MINIMUM OF 1' (30mm) DROP FROM INLET TO OUTLET. WHENEVER A SMALLER SEWER JOINS A LARGER SEWER THE INVERT OF THE SMALLER SEWER SHALL BE ABOVE THE INVERT OF THE LARGER SEWER THE AMOUNT NECESSARY TO PLACE THE .8 DEPTH OF BOTH SEWERS AT THE SAME ELEVATION.
2. 4'-0" (1.2m) DIA. MANHOLES MAY BE USED FOR PIPES UP TO 24" (600mm) DIA.
3. 5'-0" (1.5m) MANHOLES MAY BE USED FOR PIPES 27" (675mm) DIA.
4. APPROVED STRAIGHT MANHOLE SECTION WITH FLAT SLAB COVER ARE REQUIRED FOR MANHOLES 6'-0" (1.8m) OR LESS IN DEPTH.
5. NO MANHOLE STEPS ALLOWED.
6. MANHOLES WITH THE BASE POURED MONOLITHICALLY WITH THE BOTTOM BARREL ARE ALSO ACCEPTABLE.
7. SEAL JOINTS WATER TIGHT WITH APPROVED MATERIAL. GROUT HOISTING HOLES WATER TIGHT WITH NONMETALLIC, NON-SHRINK GROUT.
8. INVERTS SHALL BE U-SHAPED TO THE I.D. PIPE DIA. POINT (PIPE CROWN).
9. THE ENGINEER SHALL DETERMINE THE MANHOLE SIZE BASED ON THE ANGLE, NUMBER AND SIZE OF PIPE PENETRATIONS. THE MINIMUM DISTANCE BETWEEN KNOCKOUTS IS 12" (300mm).
10. THE UPPER PIPE AT DROP INLETS SHALL EXTEND INTO THE MANHOLE 12" (300mm) WITH THE TOP HALF CUT OUT.
11. ALL MANHOLES AT DOWNSTREAM END OF SEWER FORCE MAIN SHALL RECEIVE AN INTERIOR COATING PER CITY OF LAKELAND SPECIFICATIONS.
12. ALL MANHOLES SHALL HAVE ASPHALTIC BLACK COATING APPLIED BY BRUSH OR LOW PRESSURE SPRAYER.
13. PROVIDE BOOT AROUND PIPE.

CITY OF LAKELAND ENGINEERING DIVISION

STANDARD SANITARY SEWER MANHOLE DETAIL
FOR MANHOLE DEPTH >6' BASE TO LID

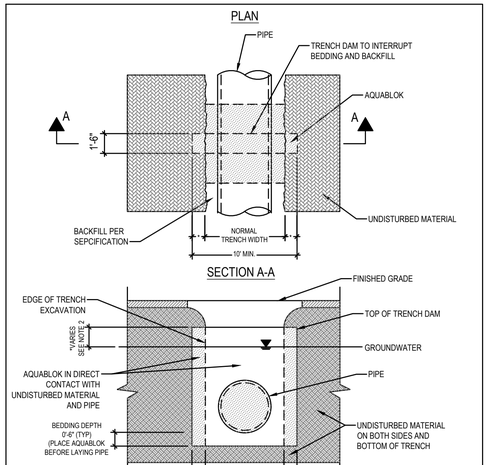
REV	DESCRIPTION	DATE
1	ORIGINAL ISSUE	8/2008

STANDARD SANITARY SEWER MANHOLE DETAIL

(FOR MANHOLE DEPTH >6' BASE TO LID)

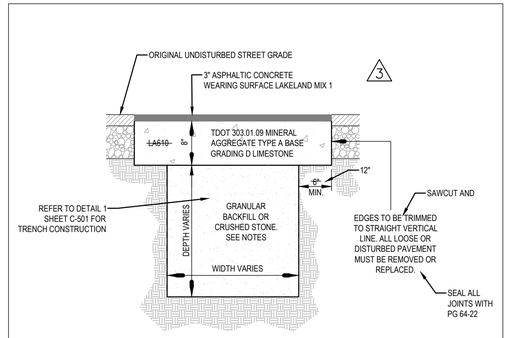
NOT TO SCALE

4' DIAMETER MANHOLE AND 5' DIAMETER MANHOLE (IN ROADS)



NOTES:

1. KEY (*) ON EACH SIDE OF TRENCH IS REQUIRED AND SHALL EXTEND 29" BEYOND UNDISTURBED MATERIAL. MINIMUM TRENCH WIDTH = 10'.
2. TOP OF TRENCH DAM SHALL EXTEND A MINIMUM OF 5'-0" ABOVE THE GROUND WATER LEVEL, AS DETERMINED BY TEH NEAREST BORING OR BY THE ENGINEER, BUT SHALL NOT EXCEED A DEPTH OF 1'-0" BELOW FINISHED GRADE.
3. TRENCH DAMS SHALL BE INSTALLED AS INDICATED ON THE CONTRACT DRAWINGS OR AS DIRECTED BY THE ENGINEER.
4. AquaBlok - COMPOSITE PARTICLE SYSTEM, 3401 GLENDALE AVE., SUITE 300 TOLEDO, OHIO 43614 PH-1800-688-2649 www.aquablok.com



NOTES:

1. SAND MAY BE USED AS BACKFILL MATERIAL IN TRENCHES 6' DEEP OR LESS.

~~2. ANY TRENCH GREATER THAN 6' IN DEPTH SHALL BE REQUIRED TO BE BACKFILLED WITH GR510 CRUSHED STONE OR AS DIRECTED BY THE CITY ENGINEER.~~

2. GRANULAR BACKFILL MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY.

TYPICAL PAVEMENT REPAIR DETAIL

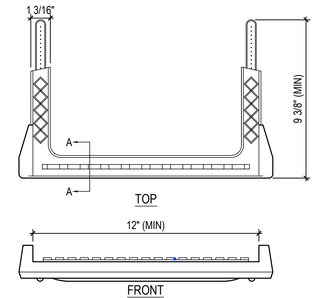
NOT TO SCALE

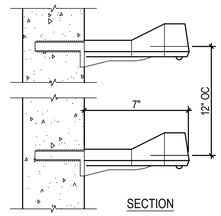
CITY OF LAKELAND ENGINEERING DIVISION

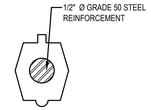
TYPICAL PAVEMENT REPAIR DETAIL

REV	DESCRIPTION	DATE
1	ORIGINAL ISSUE	8/2008
2	LA610 ADDED	1/2011

TYPICAL PAVEMENT REPAIR DETAIL
APPLICABLE ALL TRENCHES IN PAVING







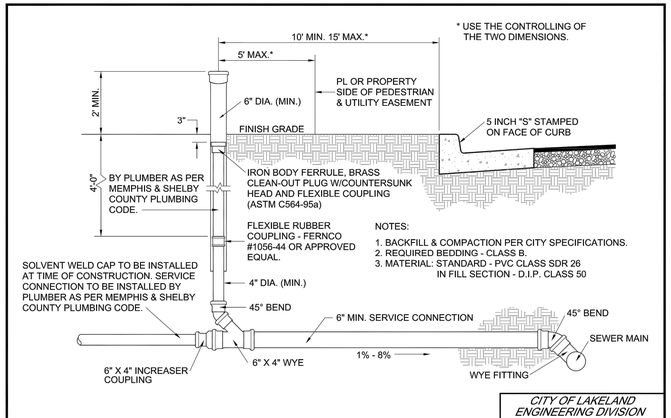
NOTES:

1. MANHOLE STEPS TO BE CO-POLYMER POLYPROPOLENE PLASTIC.
2. DISTANCE FROM RIM OF MANHOLE TO TOP STEP SHALL NOT EXCEED 2'-0".
3. DISTANCE FROM BOTTOM STEP TO FLOOR OF MANHOLE SHALL NOT EXCEED 2'-0".

1 MANHOLE STEP DETAIL

NOT TO SCALE

SIZE OF SEWER	(MIN) DROP	NOTES
8"	2'–8"	* – INDICATES DIMENSIONS FROM FABRICATED FITTINGS
10"	2'–10"	
12"	3'–3"	
*15"	6'–8"	



CITY OF LAKELAND ENGINEERING DIVISION

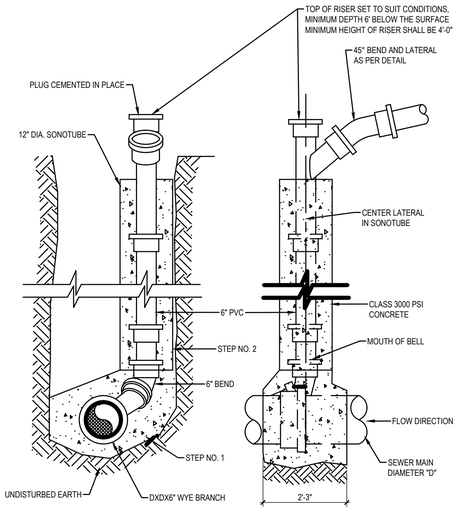
SANITARY SEWER SERVICE CONNECTION

REV.	DESCRIPTION	DATE
1	ORIGINAL ISSUE	8/2008

SANITARY SEWER SERVICE CONNECTION

NOT TO SCALE

1. REFER TO SHEET G-006 FOR SLOPE OF 6" SERVICE CONNECTION PIPE.
2. FOR LATERALS GREATER THAN 16 FT. DEEP, PROVIDE SDR21 FOR ENTIRE LENGTH OF LATERAL.
3. MAX. DEPTH OF SERVICE LATERAL AT PROPERTY LINE IS 11 FT. WHERE DEPTH CANNOT BE ACHIEVED AT 8% SLOPE, FOLLOW DEEP CUT LATERAL DETAIL AND MAINTAIN 8% SLOPE.

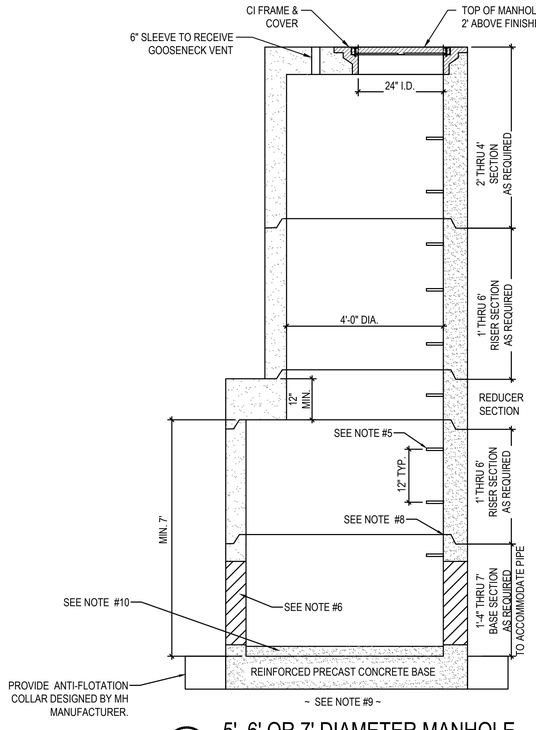


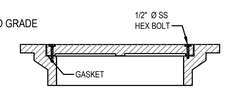
METHOD OF CONSTRUCTION:

ONCE WYE HAS BEEN INSTALLED, INSERT 6" BEND, AND POUR CONCRETE TO 1" BELOW MOUTH OF BELL. PERMIT CONCRETE TO SET UP FOR A PERIOD OF 24 HOURS BEFORE INSERTION OF RISER PIPE, AND CONCRETE ENCASEMENT.

2 DEEP CUT LATERAL

NOT TO SCALE





WATERTIGHT MANHOLE COVER
WITH HEX BOLT & GASKET

MATERIALS & FEATURES:

1. MANHOLE TO CONFORM TO LATEST ASTM C478 SPECIFICATIONS FOR "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS".
2. CONCRETE COMPRESSIVE STRENGTH 4,000 PSI MIN.
3. STEEL REINFORCING DESIGNED TO CONFORM TO THE REQUIREMENTS OF ASTM C 478 AND SHALL UTILIZE GRADE 60 RE-BARS CONFORMING TO THE REQUIREMENTS OF ASTM A 615 OR WWF CONFORMING TO THE REQUIREMENTS OF ASTM A 185 OR DRAWN WIRE CONFORMING TO THE REQUIREMENTS OF A82 OR A COMBINATION THEREOF.
4. DESIGNED H-20 LOADING.
5. STEPS SHALL BE STEEL REINFORCED COPOLYMER POLYPROPYLENE AND MEET THE REQUIREMENTS OF ASTM C 478.
6. PIPE PENETRATION TO BE AS PER JOB REQUIREMENTS AND SPECIFIC PIPE MATERIAL AND TYPE. PIPE TO BE INSTALLED BY CONTRACTOR.
7. CAST IRON RING AND COVER TO BE AS PER SPECIFICATIONS.
8. JOINTS TO BE SEALED WITH PREFORMED BUTYL RUBBER JOINT SEALANT MEETING REQUIREMENTS OF ASTM C990.
9. PROVIDE GEOTEXTILE FABRIC AND MINIMUM 6" CRUSHED STONE UNDER PRECAST BASE. PROVIDE FOUNDATION MATERIAL AS DIRECTED BY ENGINEER WHEN FOUNDATION IS SOFT.
10. FORM FLOW CHANNEL WITH NON SHRINK GROUT. SLOPE SHELF @1:12
11. PROVIDE 6" SCHEDULE 80 PVC GOOSENECK VENT PIPE WITH TWO 90° ELBOWS AND STAINLESS STEEL BIRD SCREEN SET IN PLACE WITH NON-SHRINK GROUT.

3 5', 6' OR 7' DIAMETER MANHOLE

NOT TO SCALE

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

CLEAR CREEK INTERCEPTOR
SANITARY SEWER PHASE A
CITY OF LAKELAND

NO.	REVISION	BY	DATE
3	ADDENDUM 3	DB	02/10/2023

PROJECT NO.:	77202–00
CAD FILE:	C–502.DWG
ENGR./ARCH.:	DV
DESIGN BY:	DV
DRAWN BY:	DB
CHECKED BY:	DV
DATE:	03/02/2021

STANDARD DETAILS

DRAWING NO.
C–502

SHEET 35 OF 87