NETAFIM™ IRRIGATION NOTES

PART 1 – SUBMITTALS

1.01 Submit one (1) copy of manufacturers catalog cut sheets of the following listed items (in electronic/PDF format):

1. Netafim dripper tubing specified with pressure compensating emitters
2. Netafim insert barbed fittings
3. Netafim in–line disc filter
4. Netafim pressure regulator
5. Stainless steel clamps
6. Metal ground stakes for tubing
7. PVC threaded and insert fittings

1.02 Spare parts – upon completion of the installation, turn over the following spare parts and specialty tool to the owner's authorized representative. Include with the following quantities of items a list of each part with appropriate part number (for ordering replacement products) and local supply store of where these parts can be purchased:

(10') Of dripper line for each dripper interval and discharge rate used on the project
(6) Barbed couplings
(6) Barbed 90 degree elbow fittings
(6) Barbed tee fittings
(6) 180 degree 2–way adapter tee fittings
(6) Male adapters with 3/4" fpt
(1) Spare filter element of the same mesh size used on the project

PART 2 – MATERIALS

2.10 Piping materials – Netafim Techline landscape dripline model TLHCVXR7–7712XX with copper stripe, pressure compensating, continuously self–flushing, with emitter check valve (8.3' of elevation change), shall be of nominal sized one–half inch low density, ultraviolet resistant, linear polyethylene tubing with internal pressure–compensating, self–cleaning, integral drippers (each with a built in check valve) at a specified interval. The tubing shall conform to an outside diameter (OD) of 0.66" and an inside diameter (ID) of .56". The low volume tubing shall be capable of discharging 0.77 gallons per hour (GPH) between operating pressures of 15 to 50 PSI for each dripper. The individual self–cleaning, pressure–compensating drippers shall be co–extruded to the inside of the tubing wall. The emitters are constructed of three individual pieces:

1. A black–colored dripper containing a filtration system on the inlet side, compensation cell, and recessed chamber with a water outlet.
2. A hard plastic diaphragm retainer, colored black (0.77 GPH) with chamfered edges and a recessed groove in the center, the full length of the diaphragm.
3. A flexible black rubber diaphragm that allows excessive pressure to build up within the chamber to purge sediment or other debris that may not have been captured by the disc filter.

2.20 Insert barbed fittings – shall be constructed of molded, ultraviolet resistant, brown colored plastic having a nominal inside dimension (ID) of 0.56". Each fitting shall have a minimum of two ridges or barbs per outlet. All fittings shall be of one manufacturer and shall be available in one of the following end configurations:

– Barbed insert fittings
– Male pipe threads (MPT) with barbed insert fittings
– Female pipe threads (FPT) with barbed insert fittings

2.30 Pressure regulation valves –Pressure regulation is required for all drip valves. Refer to legend.

2.40 Disc filter – the disc filter body shall be molded black plastic with male pipe threads (MPT) for both the inlet and the outlet ports. A threaded cap on one end of the body shall be capable of periodic servicing by unscrewing the cap from the main filter body. On the 3/4" model, a manual shutoff valve shall be co–molded to the opposing end of the removable cap as a part of the main body. This device shall be capable of closing off the inlet port so the disc element can be removed when the main line is still pressurized. The filter elements shall be either a disc–type or a canister screen filter. The disc–type shall be color coded in one of four colors denoting filtration of 80,120,140, and 200 mesh. The canister type screen shall be available in three levels of filtration, 80,120, and 140 mesh.

2.50 Stainless steel clamps – tubing clamps shall be constructed to 304 ANSI stainless steel and shall be one 'ear' type. The 'ear' shall be capable of being pinched with a pinching tool to secure the tubing around the insert barbed fitting. The interior clamp wall shall be smooth to prevent crimping or pinching of the tubing. Wall thickness of clamps shall be .023" with an overall band width of 1/4". Properly secured clamps shall be capable of withstanding a maximum operating pressure of 441 psi.

2.60 Flush Valves – example layouts shown demonstrating furthest downstream point for flush valve placement in drip zones. all flush valve placement and installation t.b.d. by actual field conditions, zone size, topography, hardscapes, etc.Install one flush valve per 15 gpm of zone size. Flush valves to be installed following all manufacturer specifications and recommendations, and irrigation plan notes and details, typ.

2.70 Operation Indicators – pop–up style drip operation indicators, minimum of one indicator per drip zone. Use multiple indicators for drip zones with separate bed layout areas.

PART 3 – EXECUTION

3.10 Staking for lateral dripper line layout – verify existing field dimensions of the area to be irrigated using the irrigation plans for reference/accuracy. Begin dripper tubing layout 4" away from both hardscape surfaces; i.e.., concrete sidewalks, curbs, asphalt, and/or undefined edges; i.e.., shovel–cut headers. Mark tubing intervals on the ground with flags, paint, or some other markings that can be maintained throughout the installation.

3.11 Installation of dripper tubing – tubing can be installed in one of two following methods:

1. Over excavation – In small areas, where it is feasible, over–excavate the entire area to a depth of 4" below finish grade. Plant all specimen trees and shrubs, then place tubing at the row spacing interval indicated on the plans.
2. Trenching – hand or mechanically trench to the pipe depth (4") and back fill flush with finish grade. Avoid mechanically trenching within the drip line of existing trees and shrubs. Hand trench around existing trees and shrubs when root sizes greater than 1" in diameter are encountered. Remove all rock 1–1/2" in diameter and larger when excavating and remove from site. Do not back fill trenches with rock that will come in direct contact with tubing or rigid PVC piping.

3.12 Cover – Install all underground piping horizontally and as level as possible. PVC piping should be installed to the depths and in the manner outlined in the general irrigation notes. Netafim tubing should be installed to a depth of 4" in shrub areas and 6" in turf areas. Netafim tubing should be installed with the water outlets in upward or downward facing position. Offset the outlets in adjacent rows to obtain a triangular pattern throughout the tubing layout. In irregular areas, some water outlets may end up too close to fixed improvements and may have to be capped off with a dripper plug ring.

3.13 Barbed fittings – Connect dripper tubing to barbed fittings by pushing on and over both barbs until the tubing has seated against another piece of tubing or has butted against another portion of the barbed fitting. For water pressures in excess of 40 psi, use stainless steel clamps as outlined in section 3.50 (pipe clamping).

3.14 Pipe clamping – When design operating pressure exceeds 40 psi, stainless steel pipe clamps shall be used. Slip clamps over tubing before slipping tubing over insert barbed fitting. Place clamp between the first and second ridge of the barbed fittings and crimp the 'ear' of the clamp tightly. Crimp the 'ear' a second time to ensure proper seating.

3.15 Pressure regulator – If a pressure regulator is specified, install it below grade, downstream, and in line with the remote control valve. Refer to the detail sheet. If a prv is specified it will be detailed with the remote control valve. Place the regulator with the arrow, that is molded into the side of the body, pointing in the direction of the flow of water. Provide straight piping on the outlet side of the regulator for a dimension not less than three lengths of the overall body dimension.

3.16 Remote control valve – Install the remote control valves level and below grade with a minimum of 4" of clearance to the top of the inside of the valve box cover. The arrow cast or molded into the side/bottom of the remote control valve should be pointing in the direction of the flow of water. Place a minimum of one cubic foot of 3/4" gravel in the bottom of the valve box. Support each corner of the valve box with a common red brick. At finish grade, the top of the valve box shall be two inches above surrounding grades.

3.17 Disc filter – Install the disc filter, horizontally level, below grade and after the remote control valve (refer to the detail and note sheets). The position of the disc filter in the valve box shall be off–center to allow for removal of the disc element for periodic servicing. Include a minimum of 3" deep of 3/4" gravel in the bottom of the valve box. Support the valve box using a common red brick under each corner of the valve box.

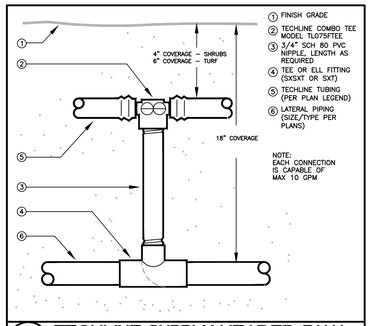
3.18 Flushing – Prior to backfill and before connection of the line flushing valves, flush the entire system to remove any dirt or sediment that may have entered the system during installation.

3.19 Testing – Prior to backfill, open the remote control valve and operate each zone. Check for leakage around barbed and threaded fittings. Make the necessary repairs to stop all leaks. After repairs, re–test to insure all leaks have been repaired. Continue this process until no more leaks are observed.

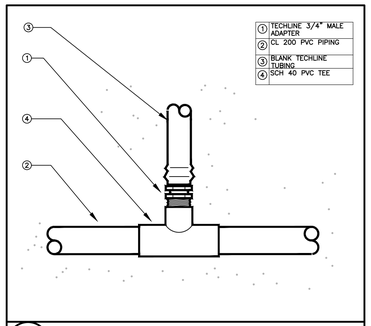
3.20 Backfill – After placement of tubing, connection to rigid PVC supply header, and initial system flushing, and testing, backfill can begin. Fill remainder of trenches, or where over–excavation and grade level installation was used, place shovel fulls of dirt on piping to keep them in place and maintain row spacing intervals as required. Bring soil up to finished grade and remove any rocks larger than 1" during final grading and contouring. Compact backfill by hand to a minimum of 90% relative compaction. Maintain adequate soil levels as needed to achieve the required compaction requirement.

3.21 Automatic Flush Valves – install automatic flush valves on all zones per manufacturer specificaitons.

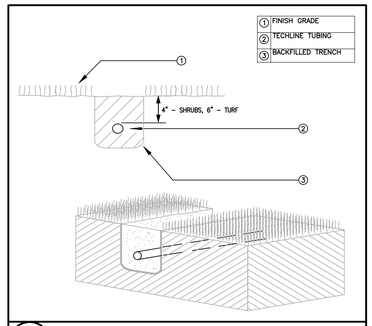
FLOW PER 100' – 0.77 EMITTER		
SPACING	GPH	GPM
12"	77	1.28



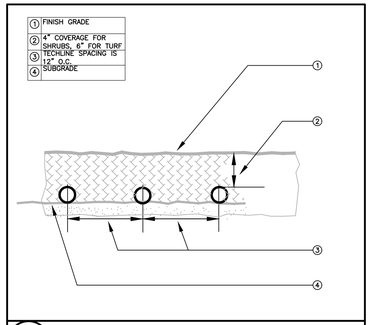
M1 TECHLINE SUPPLY HEADER-DUAL FEED



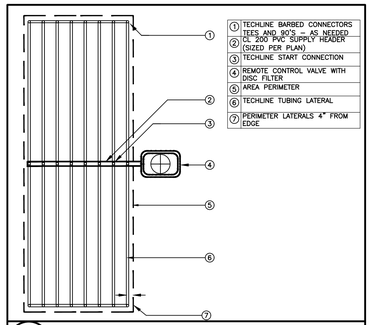
M TECHLINE TO PVC CONNECTION



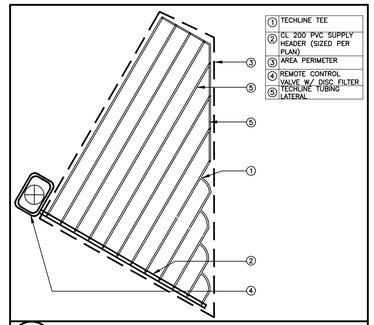
M TECHLINE TRENCHING DETAIL



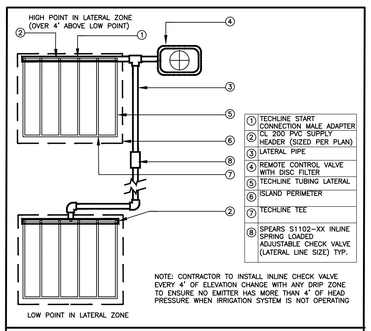
M TECHLINE SUB GRADE LAYOUT



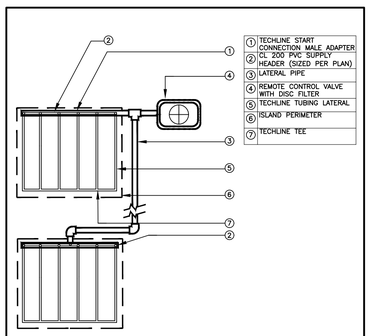
N TECHLINE DUAL FEED LAYOUT



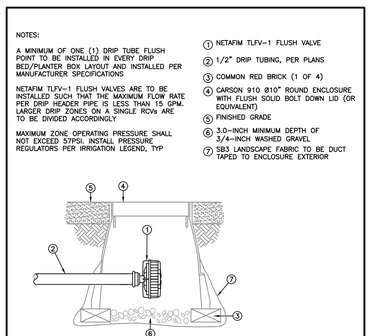
N TECHLINE ODD AREA LAYOUT



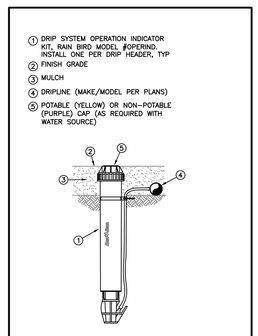
N TECHLINE MULTIPLE PLANTER LAYOUT WITH CHECK VALVE



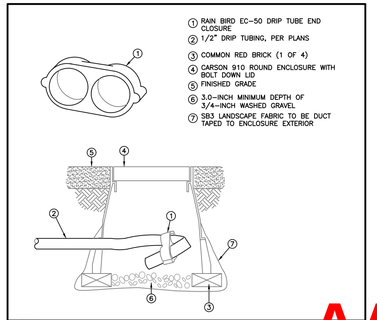
N TECHLINE MULTIPLE PLANTER LAYOUT



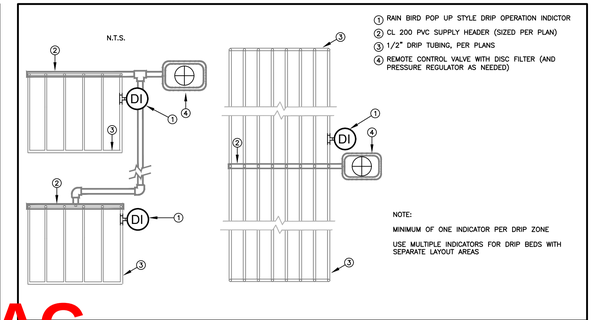
N DRIP TUBE AUTOMATIC FLUSH VALVE



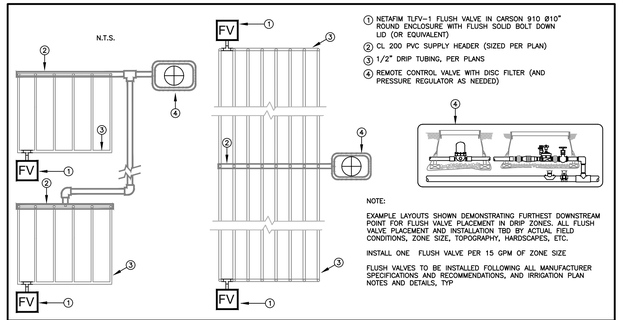
N RAIN BIRD OPERATION INDICATOR



N MANUAL DRIP TUBE FLUSH POINT



N DRIP OPERATION INDICATOR, ONE PER ZONE, OR SEPARATED AREAS, MINIMUM



N FLUSH VALVE PLACEMENT AT FURTHEST DOWNSTREAM POINT

811 KNOW WHAT'S BELOW ALWAYS CALL 811 BEFORE YOU DIG
It's fast, it's free, it's the law.
Call 811 two business days before digging

AAC
PZ24-12000026
08.20.2025

DATE:	5/1/25
SCALE:	AS SHOWN
DESIGN BY:	TFP
DRAWN BY:	TFP
CHECKED BY:	MD/MW
APPROVED BY:	MW

BY:	DESCRIPTION:	DATE:

CRAVEN • THOMPSON AND ASSOCIATES, INC.
ENGINEERS • PLANNERS • SURVEYORS
3563 N.W. 53RD STREET, FORT LAUDERDALE, FLORIDA 33309
FAX: (954) 739-6409 TEL.: (954) 739-6400
FLORIDA LICENSED ENGINEERING, SURVEYING & MAPPING BUSINESS No. 271
FLORIDA LICENSED LANDSCAPE ARCHITECTURE BUSINESS No. 0000114

MATERIAL SHOWN HEREON IS THE PROPERTY OF CRAVEN, THOMPSON & ASSOCIATES, INC. AND SHALL NOT BE REPRODUCED OR REUSED, IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION OF CRAVEN•THOMPSON & ASSOCIATES, INC.

ATLANTIC FLEET WASH
1501 WEST ATLANTIC BLVD.
POMPANO BEACH, FLORIDA

PREPARED FOR:
KAJA PROPERTIES INC.

NETAFIM NOTES AND DETAILS

Digitally signed by Nicole D. Pastre
Date: 2025.05.27 16:09:10-04'00'

Nicole D. Pastre
Florida R.L.A. No. 6667397
2025-05-27

PROJECT NO.
24-0055-001-01

IR-4
SHEET 4 OF 6

X:_Project Files Florida and Caribbean\Craven Thompson & Associates (CTA)\1501 W Atlantic_CTA-24781 (Atlantic Truck Wash)\Design\2025_0430 50% UPDATE\2025_0224_24-0055-IRR 50%.dwg [IR-4] May 27, 2025 12:47pm TPHILLIPS