

Run Set: 1	Run Set: 2	Run Set: 3	Run Set: 4	Run Set: 5	Run Set: 6	Run Set: 7	Run Set: 8	Run Set: 9	Run Set: 10	Run Set: 11	Run Set: 12	Run Set: 13
Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1
Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type
Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure
Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line
Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss
Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components
Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss
Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss
Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss
Zone 1 @ 30.76 gpm	Zone 2 @ 28.99 gpm	Zone 3 @ 22 gpm	Zone 4 @ 30.05 gpm	Zone 5 @ 14 gpm	Zone 6 @ 30.26 gpm	Zone 7 @ 29.95 gpm	Zone 8 @ 30.56 gpm	Zone 9 @ 30.76 gpm	Zone 10 @ 29.9 gpm	Zone 11 @ 29.84 gpm	Zone 12 @ 29.85 gpm	Zone 13 @ 29.66 gpm
Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss
Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss
Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss
Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss
Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation
Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement
Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure
Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure
Run Set: 14	Run Set: 15	Run Set: 16	Run Set: 17	Run Set: 18	Run Set: 19	Run Set: 20	Run Set: 21	Run Set: 22	Run Set: 23	Run Set: 24	Run Set: 25	Run Set: 26
Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1	Water Source #1
Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type	Type
Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure	Static Pressure
Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line	Service Line
Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss	Master Loss
Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components	Mainline Components
Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss	Backflow Loss
Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss	Master Valve Loss
Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss	Filter Loss
Zone 14 @ 24 gpm	Zone 15 @ 24.5 gpm	Zone 16 @ 18 gpm	Zone 17 @ 28 gpm	Zone 18 @ 34 gpm	Zone 19 @ 28 gpm	Zone 20 @ 26.9 gpm	Zone 21 @ 26.96 gpm	Zone 22 @ 24.18 gpm	Zone 23 @ 24.4 gpm	Zone 24 @ 24 gpm	Zone 25 @ 24 gpm	Zone 26 @ 28 gpm
Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss	Mainline Loss
Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss	Valve Loss
Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss	Lateral Loss
Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss	Fittings Loss
Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation	Elevation
Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement	Sprinkler Requirement
Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure	Total Design Pressure
Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure	Residual Pressure

All heads/emission devices must have matched precipitation rates when in the same zone. Those with different spray radius used in the same zone must have a matched precipitation rate.

Spray will not be allowed on any impervious surfaces.

Areas of less than 48" shall have no above ground spray.

An as built drawing will be required no more than 5 days following completion of the sytem installation.

Contractor to contact the District Operator for the required inspections.

All spray head need to have built in pressure regulators or the each zone valve should have its own pressure regulator device.



Quantity	Symbol	Description	Part Number	Pressure	Flow	Radius
Sprinklers						
11	●	Hunter 10H - PRS-04	10H	30 psi	0.88 gpm	10 ft
1	●	Hunter 10Q - PRS-04	10Q	30 psi	0.42 gpm	10 ft
1	●	Hunter 12H - PRS-04	12H	30 psi	2.7 gpm	12 ft
27	●	Hunter 12H - PRS-04	12H	30 psi	1.3 gpm	12 ft
10	●	Hunter 15F - PRS-04	15F	30 psi	3.75 gpm	15 ft
158	●	Hunter 15H - PRS-04	15H	30 psi	1.86 gpm	15 ft
36	●	Hunter 15Q - PRS-04	15Q	30 psi	0.97 gpm	15 ft
1	●	Hunter 15TQ - PRS-04	15TQ	30 psi	2.92 gpm	15 ft
8	●	Hunter 15H - PRS-04	15H	30 psi	0.47 gpm	8 ft
59	●	Hunter SS-530 - PRS-04	SS-530	30 psi	1.3 gpm	30 x 5 ft
86	●	Hunter PGP-2.0 Blue - PGP-ADJ 2		45 psi	2 gpm	34 ft
1	●	Hunter PGP-4.0 Blue - PGP-ADJ 4		45 psi	4 gpm	40 ft
80	●	Rain Bird 1402	1402	30 psi	0.5 gpm	0 ft

Meters/Pumps

1 1 inch meter

Backflow Devices

1 Febco 765 - 2" 765 - 2"

Control Valves

1 Hunter PGPV-100G-S PGPV-100G-S

22 Hunter PGPV-151 Globe PGPV-151 Globe

1 Hunter PGPV-201 Globe PGPV-201 Globe

Irrigation Accessories

1 Weather TRAK ET Pro3

1 Nibco 2 1/2" isolation valve

1 Rain Bird FS200P FS200P

1 Rain / Freeze Sensor- Wireless Model Weather Trak

Lateral Line Pipe

3986 ft Class 315 1/2"

1777 ft Class 200 3/4"

1567 ft Class 200 1"

900 ft Class 200 1 1/4"

116 ft Class 200 1 1/2"

116 ft Class 200 2"

144 ft Class 200 2 1/2"

Mainline Pipe

2867 ft Class 200 2 1/2"

Sprinkler Zone	Zone #	Total Area	Total Flow	Precip Rate
	1	3363.52 Sq/Ft	30.76 gpm	0.85 in/hr
	2	3019.17 Sq/Ft	28.99 gpm	0.92 in/hr
	3	34.35 Sq/Ft	22 gpm	61.69 in/hr
	4	2244.94 Sq/Ft	30.05 gpm	1.29 in/hr
	5	21.86 Sq/Ft	14 gpm	61.69 in/hr
	6	2246.09 Sq/Ft	30.26 gpm	1.14 in/hr
	7	3174.41 Sq/Ft	29.85 gpm	0.91 in/hr
	8	3456.56 Sq/Ft	30.56 gpm	0.85 in/hr
	9	3593.92 Sq/Ft	30.76 gpm	0.82 in/hr
	10	2981.45 Sq/Ft	29.9 gpm	1 in/hr
	11	3720.58 Sq/Ft	29.84 gpm	0.77 in/hr
	12	3269.4 Sq/Ft	29.85 gpm	0.87 in/hr
	13	1658.73 Sq/Ft	20.66 gpm	1.2 in/hr
	14	1096.48 Sq/Ft	26 gpm	2.28 in/hr
	15	1270.63 Sq/Ft	24.5 gpm	1.86 in/hr
	16	4127.52 Sq/Ft	18 gpm	0.42 in/hr
	17	11453.62 Sq/Ft	28 gpm	0.24 in/hr
	18	9676.94 Sq/Ft	24 gpm	0.23 in/hr
	19	11393.52 Sq/Ft	28 gpm	0.24 in/hr
	20	3131.71 Sq/Ft	26.9 gpm	0.89 in/hr
	21	3544.43 Sq/Ft	28.96 gpm	0.79 in/hr
	22	2910.1 Sq/Ft	24.18 gpm	0.8 in/hr
	23	2620.82 Sq/Ft	24.4 gpm	0.9 in/hr
	24	10968.96 Sq/Ft	26 gpm	0.23 in/hr
	25	10498.36 Sq/Ft	24 gpm	0.22 in/hr
	26	11766.17 Sq/Ft	28 gpm	0.23 in/hr

Water Source #1	
Meter Size	1 inch meter
Static Pressure	65 psi
Elevation Change	0 ft
Service Line Information	
Pipe Category	Poly 180
Pipe Size	Poly 160 2"
Length	0 ft
Velocity	5 fps
Recommendations	
Maximum Recommended Flow	33 gpm
Available Working Pressure	58.5 psi

The maximum velocity of the PVC water piping will not exceed 5 linear feet per second. Plans and instruction manuals will be kept on site during the installation of the system. Proposed watering schedule will be programmed into controller.

There will be a permanent sticker on controller.

Wiring used to connect controller is U.L. approved.

Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TCEQ) (MC-178).

PO Box 13057, Austin, Texas 78711-3057.

TCEQ's website is:

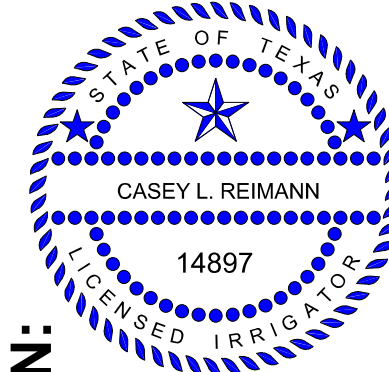
www.tceq.state.tx.us.

Backflow preventer will need to be tested yearly.



**TEXAS
IRRIGATION
DESIGN**

281 341-0499



SHEET DESCRIPTION:
IRRIGATION DESIGN

Casey Reimann
01/28/2014

PROJECT:
20903 HIGHLAND KNOLLS
KATY, TX 77450

REVISIONS:
None

DATE:
01/28/2015

JOB NUMBER:
D1-01282014

DRAWN BY:
CASEY REIMANN

CHECKED BY:
CLR

SCALE:
1" = 50'

SHEET:
1 of 1