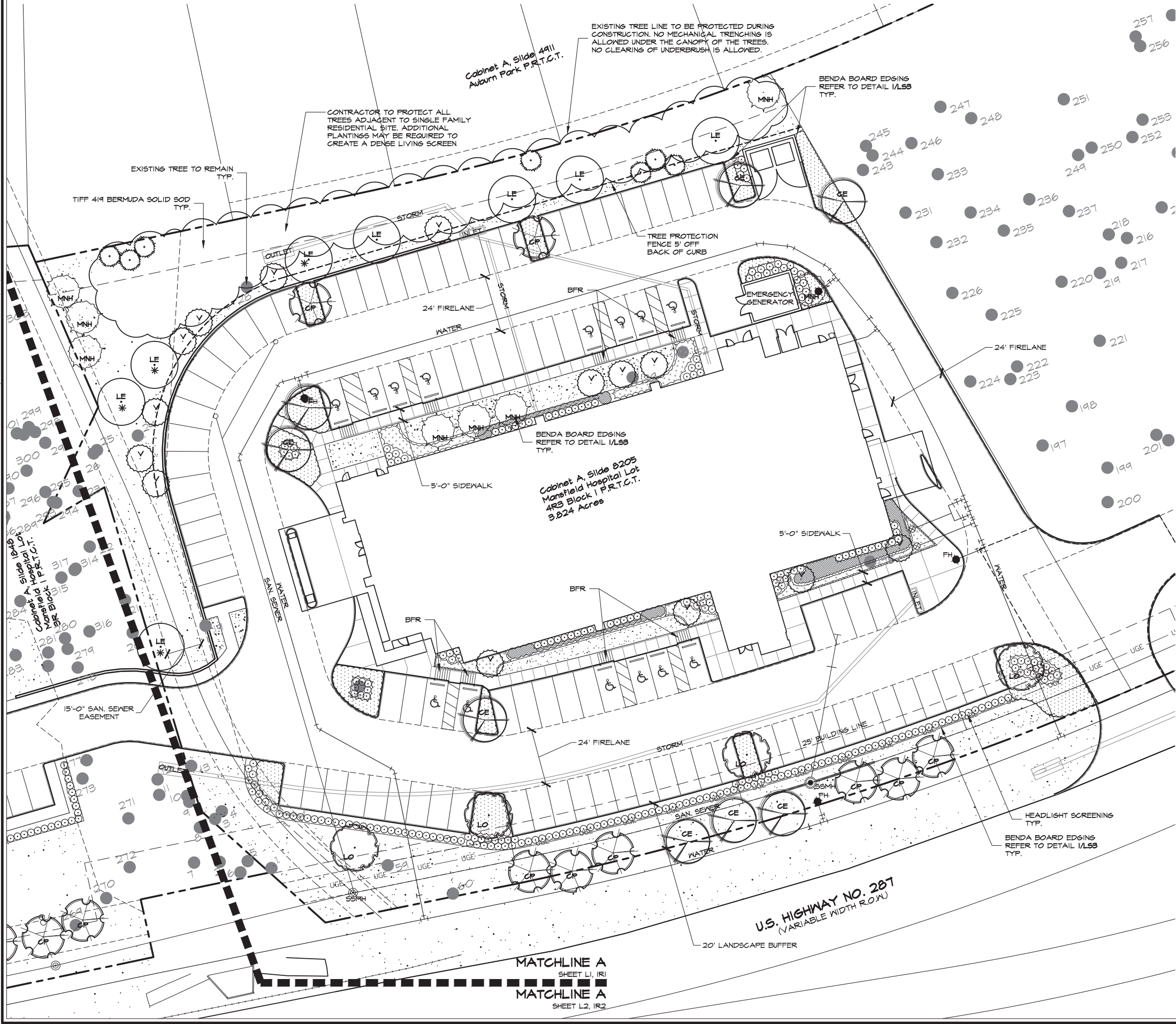


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LANDSCAPE LEGEND

- LO LIVE OAK / QUERCUS VIRGINIANA (4" CALIPER)
- LE LACEBARK ELM / ULMUS PARVIFOLIA (4" CALIPER)
- CE CEDAR ELM / ULMUS CRASSIFOLIA (4" CALIPER)
- CP CHINESE PISTACHIO / PISTACHIA CHINENSIS (4" CALIPER)
- MNH MULTI-TRUNK NELLIE R. STEVENS HOLLY TREE FORM / MULTI-TRUNK ILEX NELLIE R. STEVENS' TREE FORM (3" CALIPER)
- V MULTI-TRUNK VITEX / MULTI-TRUNK VITEX AGNUS CASTUS (3" CALIPER)
- DWARF BURFORD HOLLY / ILEX CORNUTA 'DWARF BURFORD' (7 GALLON)
- KNOCKOUT ROSE / ROSA SPP. (3 GALLON)
- LIRIOPE / LIRIOPE MUSCARI (1 GALLON, SPACED 12" O.C.)
- BAR HARBOR JUNIPER / JUNIPERUS HORIZONTALIS 'BAR HARBOR' (3 GALLON, SPACED 36" O.C.)
- WEEPING LOVE GRASS (1 GALLON, SPACED 12" O.C.)
- TIFF 419 BERMUDA SOLID SOD (MINIMUM 100% COVERAGE)
- 204 EXISTING TREE TO REMAIN TYP.
- \* INDICATES BUFFER TREE RELOCATED ON SITE



1" = 20' - 0"

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

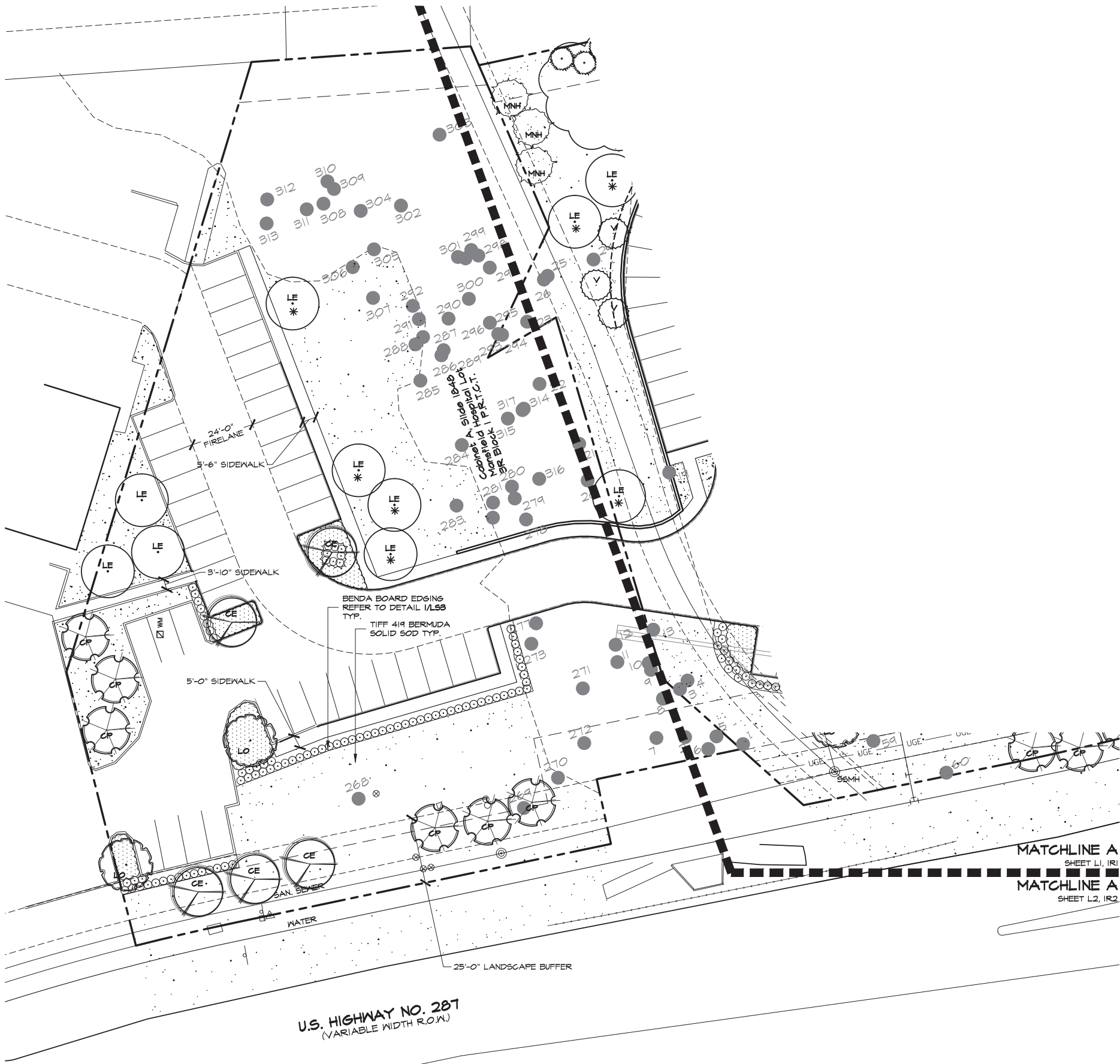
Landscape Plan  
Emerus Emergency Hospital  
City of Mansfield, Tarrant County, Texas

#	DATE	REVISIONS
1	07/15/2013	AW / 07/15/2013
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PROJECT  
PWP007  
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L1 of 3

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LANDSCAPE LEGEND

- LO LIVE OAK / QUERCUS VIRGINIANA (4" CALIPER)
- LE LACEBARK ELM / ULMUS PARVIFOLIA (4" CALIPER)
- CE CEDAR ELM / ULMUS CRASSIFOLIA (4" CALIPER)
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STUDIO 13 DESIGN GROUP

Studio 13 Design Group, PLLC.  
5119 Rembert Lane, Suite 203  
Lewisville, Texas 75057  
469-615-1900

LEONARD W. REYNOLDS  
STATE OF TEXAS  
JULY 15, 2013

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1" = 20' - 0"

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NORTH

LANDSCAPE AND SCREENING

Landscape Plan

Emerus Emergency Hospital

City of Mansfield, Tarrant County, Texas

#	PLAN REVIEW REVISIONS	BY	DATE
1	Addendum #3 - City Comments	AEW	07/15/2013
2	ASH-002		07/15/13
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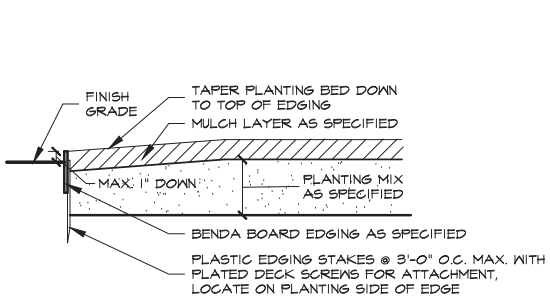
LANDSCAPE NOTES:

1. A TREE PERMIT IS REQUIRED FOR ALL REMOVAL OF ALL TREES, PROTECTED AND UNPROTECTED.
2. PLANT MATERIAL SHALL BE MEASURED AND SIZED ACCORDING TO THE LATEST EDITION OF THE TEXAS NURSERY & LANDSCAPE ASSOCIATION (TNLA) SPECIFICATIONS, GRADES AND STANDARDS.
3. ALL PLANT SUBSTITUTIONS ARE SUBJECT TO CITY APPROVAL AND MUST BE SPECIFIED ON THE APPROVED LANDSCAPE PLAN.
4. GROUND COVERS USED IN LIEU OF TURF GRASS MUST PROVIDE COMPLETE COVERAGE WITHIN ONE (1) YEAR OF PLANTING AND MAINTAIN ADEQUATE COVERAGE AS APPROVED BY THE CITY OF MANSFIELD.
5. TREES MUST BE PLANTED FOUR FEET (4') OR GREATER FROM CURBS, SIDEWALKS, UTILITY LINES, SCREENING WALLS AND/OR OTHER STRUCTURES. THE CITY OF MANSFIELD HAS FINAL APPROVAL FOR ALL TREE PLACEMENTS.
6. TREE PITS SHALL HAVE ROUGHENED SIDES AND BE TWO TO THREE TIMES WIDER THAN THE ROOT BALL OF THE TREE IN ORDER TO FACILITATE HEALTHY ROOT GROWTH.
7. TREE PITS SHALL BE TESTED FOR WATER PERCOLATION. IF WATER DOES NOT DRAIN OUT OF TREE PIT WITH IN A 24-HOUR PERIOD, THE CONTRACTOR SHALL PROVIDE BERMING, OR DEVISE DRAINAGE PRACTICES, AND CONTACT THE CITY LANDSCAPE ARCHITECT PRIOR TO PLANTING.
8. TREES SHALL NOT BE PLANTED DEEPER THAN THE BASE OF THE "TRUNK FLARE".
9. THE TREE PIT SHALL BE BACKFILLED WITH NATIVE TOPSOIL FREE OF ROCK AND OTHER DEBRIS.
10. BURLAP, TWINE AND WIRE BASKETS SHALL BE LOOSENEED AND PULLED BACK FROM THE TRUNK OF TREE AS MUCH AS POSSIBLE.
11. TREES SHALL NOT BE WATERED TO EXCESS THAT RESULTS IN SOIL SATURATION. IF SOIL BECOMES SATURATED, THE WATERING SCHEDULE SHALL BE ADJUSTED TO ALLOW FOR DRAINAGE AND ABSORPTION OF THE EXCESS WATER.
12. A 3"-4" LAYER OF MULCH SHALL BE PROVIDED AROUND THE BASE OF THE PLANTED TREE. THE MULCH SHALL BE PULLED BACK 1-2" FROM THE TRUNK OF THE TREE.
13. NO PERSON(S) OR ENTITY MAY USE IMPROPER OR MALICIOUS MAINTENANCE OR PRUNING TECHNIQUES WHICH WOULD LIKELY LEAD TO THE DEATH OF THE TREE. IMPROPER OR MALICIOUS TECHNIQUES INCLUDE, BUT ARE NOT LIMITED TO, TOPPING OR OTHER UNSYMMETRICAL TRIMMING OF TREES, TRIMMING TREES WITH A BACKHOE, OR USE OF FIRE OR POISON TO CAUSE THE DEATH OF A TREE.
14. TOPSOIL SHALL BE A MINIMUM OF 8 INCHES IN DEPTH IN PLANTING AREAS. SOIL SHALL BE FREE OF STONES, ROOTS, AND CLODS AND ANY OTHER FOREIGN MATERIAL THAT IS NOT BENEFICIAL FOR PLANT GROWTH.
15. ALL PLANT BEDS SHALL BE TOP-DRESSED WITH A MINIMUM OF 2 INCHES OF PINE STRAW MULCH.
16. TREES OVERHANGING WALKS AND PARKING SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 7 FEET. TREES OVERHANGING PUBLIC STREET PAVEMENT DRIVE AISLES AND FIRE LANES SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 14 FEET.
17. A VISIBILITY TRIANGLE MUST BE PROVIDED AT ALL INTERSECTIONS. SHRUBS ARE NOT TO EXCEED 30 INCHES IN HEIGHT. TREES SHALL HAVE A MINIMUM CLEAR TRUNK HEIGHT OF 9 FEET.
18. TREES PLANTED ON A SLOPE SHALL HAVE THE SOIL STAIN AT THE AVERAGE GRADE OF SLOPE.
19. NO SHRUBS SHALL BE PERMITTED WITHIN AREAS LESS THAN 3 FEET IN WIDTH. ALL BEDS LESS THAN 3 FEET IN WIDTH SHALL BE GRASS, GROUNDCOVER, OR SOME TYPE OF FIXED PAVING.
20. THE OWNER, TENANT, AND/OR THEIR AGENTS, IF ANY, SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE MAINTENANCE, ESTABLISHMENT, AND PERMANENCE OF PLANT MATERIAL. ALL LANDSCAPING SHALL BE MAINTAINED IN A NEAT AND ORDERLY MANNER AT ALL TIMES. THIS SHALL INCLUDE, BUT NOT LIMITED TO, MOWING, EDGING, PRUNING, FERTILIZING, WATERING, AND OTHER ACTIVITIES NECESSARY FOR THE MAINTENANCE OF LANDSCAPED AREAS.
21. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION AS IS APPROPRIATE FOR THE SEASON OF THE YEAR. PLANT MATERIAL THAT IS DAMAGED, DESTROYED, OR REMOVED SHALL BE REPLACED WITH PLANT MATERIAL OF SIMILAR SIZE AND VARIETY WITHIN 30 DAYS UNLESS OTHERWISE APPROVED IN WRITING BY THE CITY OF MANSFIELD.
22. LANDSCAPE AND OPEN AREAS SHALL BE KEPT FREE OF TRASH, LITTER AND WEEDS.
23. AN AUTOMATIC IRRIGATION SYSTEM SHALL BE PROVIDED TO IRRIGATE ALL LANDSCAPE AREAS. OVERSPRAY ON STREETS AND WALKS IS PROHIBITED. A PERMIT FROM THE BUILDING INSPECTION DEPARTMENT IS REQUIRED FOR EACH IRRIGATION SYSTEM.
24. NO PLANT MATERIAL SHALL BE ALLOWED TO ENCROACH ON RIGHT-OF-WAY, SIDEWALKS OR EASEMENTS TO THE EXTENT THAT THE VISION OR ROUTE OF TRAVEL FOR VEHICULAR, PEDESTRIAN, OR BICYCLE TRAFFIC IS IMPEDED.
25. NO PLANTING AREAS SHALL EXCEED 3:1 SLOPE. 3' HORIZONTAL TO 1' VERTICAL.
26. EARTHEN BERMS SHALL NOT INCLUDE CONSTRUCTION DEBRIS. CONTRACTOR MUST CORRECT SLIPPAGE OR DAMAGE TO THE SMOOTH FINISH GRADE OF THE BERM PRIOR TO ACCEPTANCE.
27. ALL WALKWAYS SHALL MEET A.D.A. AND T.A.S. REQUIREMENTS.
28. FINAL INSPECTION AND APPROVAL OF SCREENING WALLS, IRRIGATION AND LANDSCAPE IS SUBJECT TO ALL PUBLIC UTILITIES, INCLUDING BUT NOT LIMITED TO MANHOLES, VALVES, WATER METERS, CLEANOUTS AND OTHER APPURTENANCES, TO BE ACCESSIBLE, ADJUSTED TO GRADE AND TO THE CITY OF MANSFIELD'S STANDARDS.
29. PRIOR TO CALLING FOR A LANDSCAPE INSPECTION, CONTRACTOR IS RESPONSIBLE FOR MARKING ALL MANHOLES, VALVES, WATER METERS, CLEANOUTS AND OTHER UTILITY APPURTENANCES WITH FLAGGING FOR FIELD VERIFICATION BY THE PUBLIC WORKS DEPARTMENT.

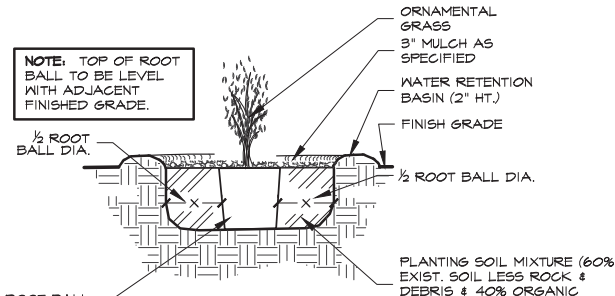
PLANT LIST					
SYMBOL	COMMON/BOTANICAL NAME	SIZE	SPACING	QUANTITY	REMARKS
LE	LACEBARK ELM / ULMUS PARVIFOLIA	4" CALIPER	AS SHOWN	17	6' MINIMUM SPREAD; MINIMUM 7' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN.
CE	CEDAR ELM / ULMUS CRASSIFOLIA	4" CALIPER	AS SHOWN	13	6' MINIMUM SPREAD; MINIMUM 7' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN.
LO	LIVE OAK / QUERCUS VIRGINIANA	4" CALIPER	AS SHOWN	6	6' MINIMUM SPREAD; MINIMUM 7' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN.
CP	CHINESE PISTACHIO / PISTACHIA CHINENSIS	4" CALIPER	AS SHOWN	14	6' MINIMUM SPREAD; MINIMUM 7' HEIGHT; FULL ROUNDED HEAD 6' MINIMUM BRANCHING HEIGHT; NURSERY GROWN.
MNH	MULTI-TRUNK NELLIE R. STEVENS HOLLY TREE FORM / MULTI-TRUNK ILEX NELLIE R. STEVENS' TREE FORM	3" CALIPER	AS SHOWN	8	5' MINIMUM SPREAD; MINIMUM 6' HEIGHT; 2" MIN. CAL.; FULL HEAD NURSERY GROWN
V	MULTI-TRUNK VITEX / MULTI-TRUNK VITEX AGNUS CASTUS	3" CALIPER	AS SHOWN	10	5' MINIMUM SPREAD; MINIMUM 6' HEIGHT; 2" MIN. CAL.; FULL HEAD NURSERY GROWN
	DWARF BURFORD HOLLY / ILEX CORNUTA 'DWARF BURFORD'	7 GALLON	AS SHOWN	209	FULL PLANTS
	KNOCKOUT ROSE / ROSA SPP.	3 GALLON	AS SHOWN	143	FULL PLANTS
	LIRIOPE / LIRIOPE MUSCARI	1 GALLON	12" O.C.	678	FULL PLANTS
	WEeping LOVE GRASS / ERAGROSTIS CURVULA	1 GALLON	12" O.C.	4,502	FULL PLANTS
	BAR HARBOR JUNIPER / JUNIPERUS HORIZONTALIS 'BAR HARBOR'	3 GALLON	24" O.C.	107	FULL PLANTS
	TIFF 419 BERMUDA SOLID SOD	SOLID SOD	SQUARE YARDS	56,130	MINIMUM 100% COVERAGE

LANDSCAPE REQUIREMENTS

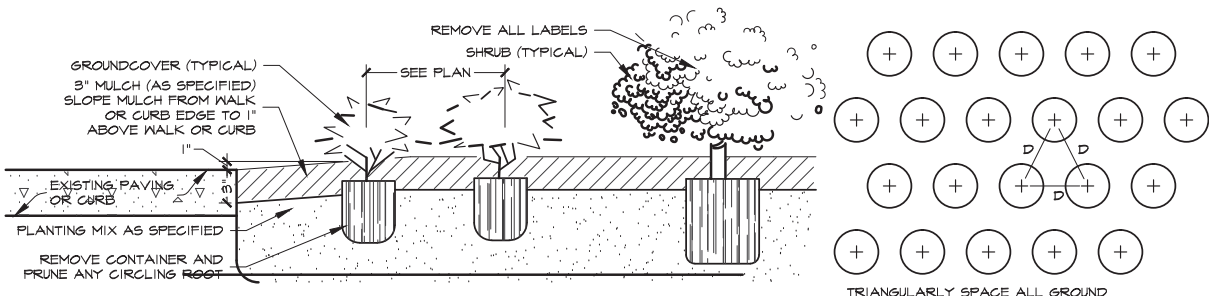
- REQUIRED:
- 1 TREE PLANTED EVERY FOURTY FEET ALONG SOUTH BOUNDARY w/ SHARED DRIVE AISLE
  - 1 TREE PER FORTY FEET WITHIN LANDSCAPE BUFFER 600LF / 40 LF = 15 TREES
  - 225 LF ALONG DRIVE AISLE 225 L.F./40 L.F. = 5.6 = 6 TREES REQUIRED
  - 1 TREE AND ISLAND / 10 PARKING SPACES 99 PARKING SPOTS / 10 = 10 TREES AND 10 ISLANDS
  - ALL CANOPY TREES SHALL BE MINIMUM OF 3.5 CALIPER INCHES
  - ALL ORNAMENTAL TREES SHALL BE MULTI-TRUNK AND HAVE MINIMUM OF 3 CALIPER INCHES
- PROVIDED:
- 6 TREES ALONG SOUTH DRIVE AISLE
  - 10 TREES AND 10 ISLANDS
  - 15 TREES WITHIN LANDSCAPE BUFFER
  - ALL CANOPY TREES ARE 4 CAL. INCHES
  - ALL ORNAMENTAL TREES ARE MULTI-TRUNK AND 3 CAL. INCHES



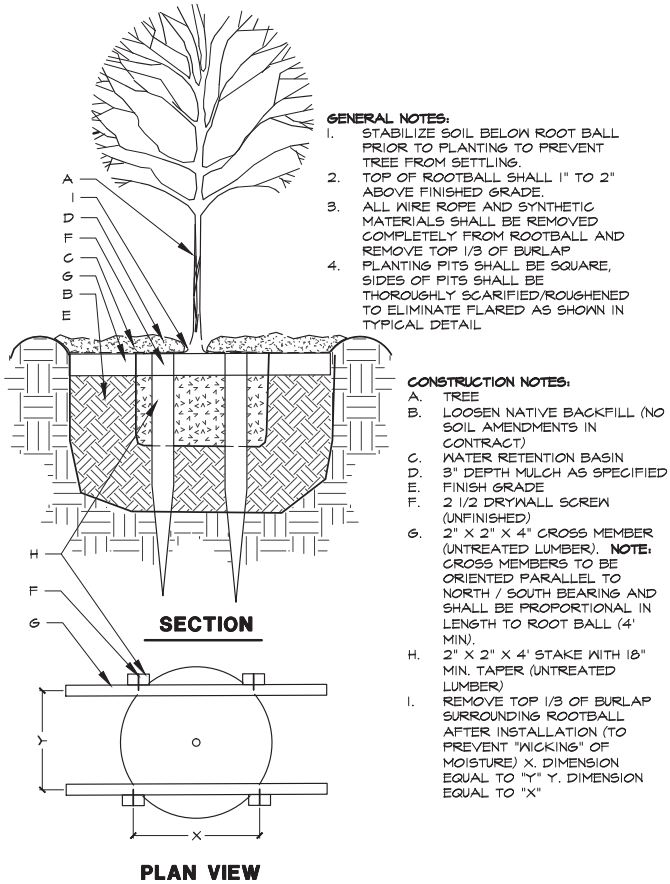
1 L3 TYPICAL BED EDGING DETAIL NOT TO SCALE



2 L3 POCKET PLANTING ORNAMENTAL GRASS DETAIL NOT TO SCALE



3 L3 SHRUB AND GROUNDCOVER PLANTING DETAIL NOT TO SCALE



5 L3 TREE PLANTING NOT TO SCALE



Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.

One Inch

LANDSCAPE AND SCREENING

Landscape Details

Emerus Emergency Hospital

City of Mansfield, Tarrant County, Texas

BY	DATE
AEW	07-15-2013
	07/15/13

PLAN REVIEW REVISIONS	
#	Comments
1	Addendum #3 - City Comments
AS1-002	

PROJECT  
PWP007

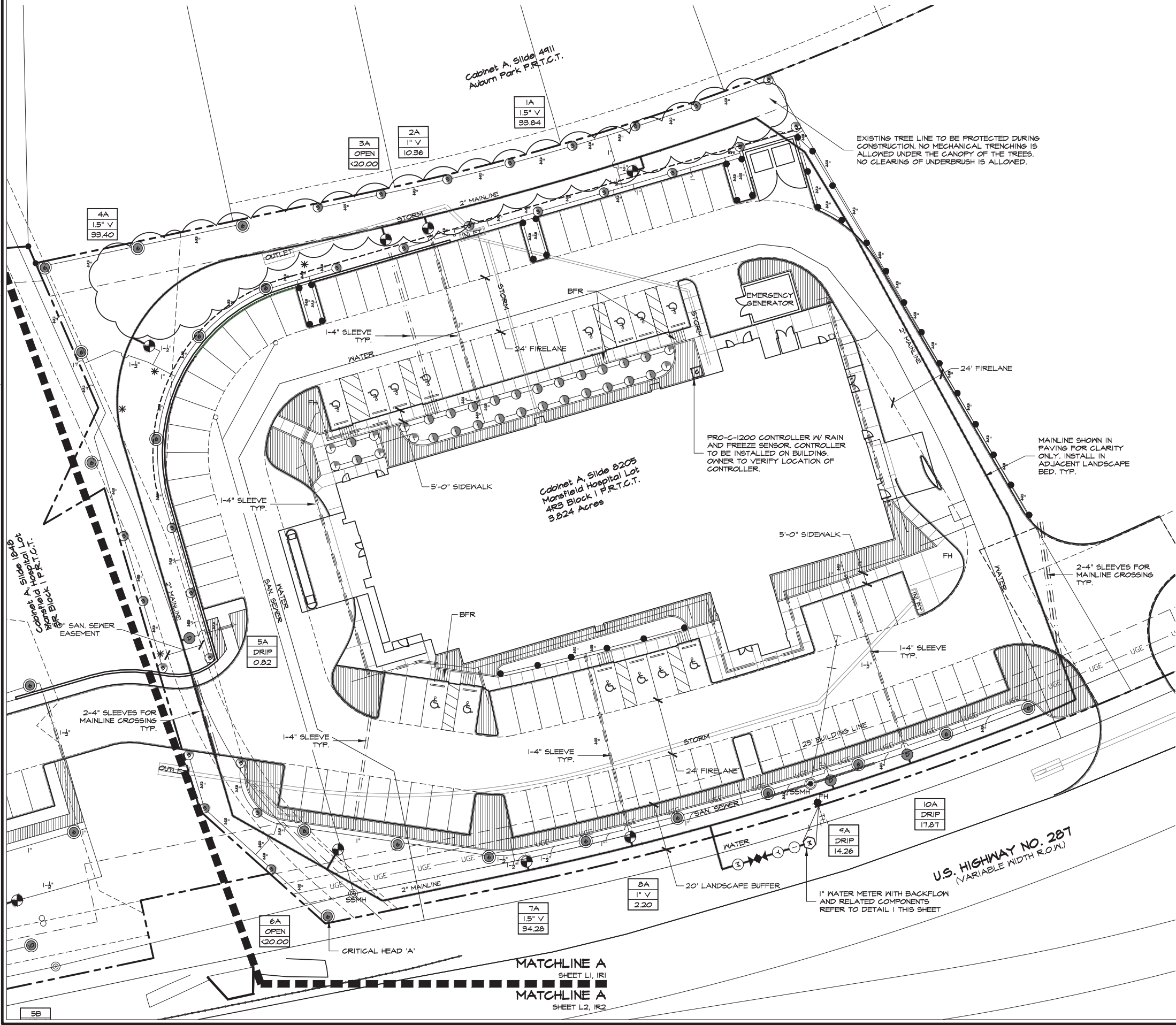
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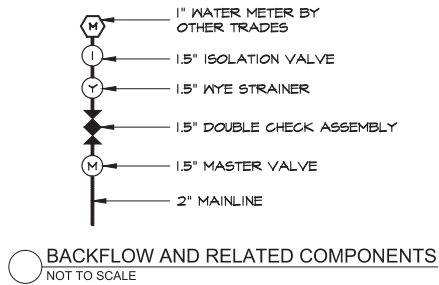
HYDRAULIC CALCULATION NOTES:

TEN DAYS PRIOR TO COMMENCING WORK, VERIFY STATIC PRESSURE. IF STATIC PRESSURE IS LESS THAN THE ASSUMED STATIC PRESSURE DO NOT START WORK UNTIL NOTIFIED IN WRITING TO PROCEED BY OWNER. IF CONTRACTOR PROCEEDS WITH WORK WITHOUT AUTHORIZATION FROM OWNER, THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE TO CORRECT, MODIFY OR REPAIR ANY ITEMS OR MATERIALS THAT MAY BE REQUIRED TO PROVIDE A FULLY FUNCTIONING AND OPERATIONAL IRRIGATION SYSTEM IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. HYDRAULIC CALCULATIONS FOR THIS SYSTEM ARE BASED ON THE STATIC PRESSURE AS STATED ABOVE. THE STATIC PRESSURE SHOWN IS AN ASSUMED PRESSURE, A PRESSURE MEASURED AT THE SITE, OR AN ESTIMATED PRESSURE PROVIDED BY THE COUNTY OR CITY. THE OWNER UNDERSTANDS THIS PROJECT MAY NOT PROVIDE 100% COVERAGE AT ALL TIMES.

HYDRAULIC CALCULATIONS FROM METER A ZONE# 7A

ITEM	SIZE	PSI	NOTES
MAXIMUM GPM			FITTING LOSS ACCOUNTED BY ADDING 10% TO FLOW SHOWN IN MANUF. NOZZLE CHART.
ESTIMATED - 120 GPM			
SERVICE	1.5"	0.34	TYPE 'K' COPPER 20 LN. FT. (34.28 GPM)
WATER METER	1"	7.80	(34.28 GPM)
BALL VALVE	1.5"	1.00	(34.28 GPM)
WYE FILTER	1.5"	0.30	(34.28 GPM)
BACKFLOW PREVENTER	1.5"	4.00	(34.28 GPM)
MASTER VALVE	1.5"	1.70	(34.28 GPM)
MAIN LINE	1.5"	1.70	(34.28 GPM)
STATION VALVE	2"	1.62	381 LN. FT. (17.14 GPM)
ZONE #7A	1.5"	2.31	(34.28 GPM)
CRITICAL HEAD 'A'		40.00	
TOTAL LOSS		61.03	
ASSUMED STATIC PRESSURE		79.00	
PRESSURE DIFFERENTIAL		-15.97	

ZONE VALVES LABELED AS 'OPEN' ARE INTENDED FOR THE USE OF SUPPLYING HUNTER AFB-ADJ TREE BUBBLERS ON EACH PROPOSED TREE. IRRIGATION CONTRACTOR SHALL FIELD VERIFY THAT THESE ZONES DO NOT EXCEED 20 GALLONS PER MINUTE. THE IRRIGATION CONTRACTOR SHALL STAKE EACH TREE BUBBLER HEAD LOCATION AND RECEIVE APPROVAL FROM THE OWNER AND/OR THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.



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1" = 20' - 0"

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One Inch

LANDSCAPE AND SCREENING

Irrigation Plan

Emerus Emergency Hospital

City of Mansfield, Tarrant County, Texas

DATE	BY	PLAN REVIEW REVISIONS
09-25-2013	LWR	1 Issued for Construction

PROJECT	PWP007
SHEET	IR1 of 3

Philo Wilke Partnership

11275 S. Sam Houston Parkway W.  
Suite 200  
Houston, Texas 77031  
(832) 554-1130  
www.pwarch.com

EMERUS  
ADVANCED EMERGENCY CARE





















ITEM	SIZE	PSI	NOTES
MAXIMUM, 6PM ESTIMATED - 120 6PM			FITTINGS LOSS ACCOUNTED BY ADDING 10% TO FLOW SHOWN IN MANUF. NOZZLE CHART.
SERVICE	1.5"	0.98	TYPE "K" COPPER 10 LN. FT. (24.70 6PM)
WATER METER	1"	5.90	(24.70 6PM)
BALL VALVE	1"	1.00	(24.70 6PM)
WYE FILTER	1"	0.90	(24.70 6PM)
BACKFLOW PREVENTER	1"	4.00	(24.70 6PM)
MASTER VALVE	1"	4.00	(24.70 6PM)
MAIN LINE	2"	0.88	80 LN. FT. (24.70 6PM)
STATION VALVE	1"	4.00	(24.70 6PM)
ZONE #52	1.5"	3.70	(24.70 6PM)
CRITICAL HEAD "B"		40.00	
TOTAL LOSS		69.06	
ASSUMED STATIC PRESSURE		75.00	
PRESSURE DIFFERENTIAL		-11.94	

HYDRAULIC CALCULATION NOTES:

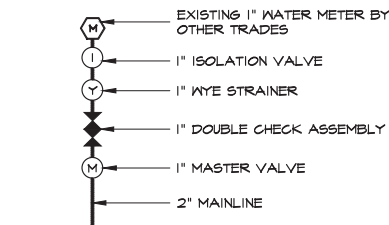
TEN DAYS PRIOR TO COMMENCING WORK, VERIFY STATIC PRESSURE. IF STATIC PRESSURE IS LESS THAN THE ASSUMED STATIC PRESSURE DO NOT START WORK UNTIL NOTIFIED IN WRITING TO PROCEED BY OWNER. IF CONTRACTOR PROCEEDS WITH WORK WITHOUT AUTHORIZATION FROM OWNER, THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE TO CORRECT, MODIFY OR REPAIR ANY ITEMS OR MATERIALS THAT MAY BE REQUIRED TO PROVIDE A FULLY FUNCTIONING AND OPERATIONAL IRRIGATION SYSTEM IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS. HYDRAULIC PRESSURE SHALL BE MEASURED AT THE POINT OF THE STATIC PRESSURE AS STATED ABOVE. THE STATIC PRESSURE SHOWN IS AN ASSUMED PRESSURE, A PRESSURE MEASURED AT THE SITE, OR AN ESTIMATED PRESSURE PROVIDED BY THE COUNTY OR CITY. THE OWNER UNDERSTANDS THIS PROJECT MAY NOT PROVIDE 100% COVERAGE AT ALL TIMES.

## IRRIGATION LEGEND AND SCHEDULE

SYM	DESCRIPTION	MANUFACTURER	MODEL	SIZE / NOZZLE	NOTES
	AUTOMATIC CONTROLLER	HUNTER	REFER TO PLANS	N/A	INSTALL PER MANUFACTURER'S STANDARDS. IN ADDITION, INSTALL SOLAR-SYNC SYSTEM BY HUNTER.
	DRIP IRRIGATION CONTROL VALVE	HUNTER	ICZ-101	1"	INSTALL PER DETAIL IN 10" ROUND BOX w/ BOLT DOWN LID. ROUT AND PAINT VALVE NUMBER ON LID.
	DRIP IRRIGATION	HUNTER	PLD-06-18	N/A	INSTALL PER DETAIL w/ 40 PSI AT OUTFLOW OF DRIP ZONE VALVE.
	DRIP IRRIGATION	HUNTER	AFB-ADJ BUBBLER	1/2"	INSTALL PER DETAIL w/ 40 PSI AT BASE OF HEAD. INSTALL ON ALL PROPOSED TREES, SEE LANDSCAPE PLANS.
	REMOTE CONTROL VALVE	HUNTER	ICV-101S ICV-151S	Refer to Plan for Size	INSTALL PER DETAIL IN 10" ROUND PENTEK VALVE BOX WITH BOLT DOWN LID. ROUT AND PAINT VALVE NUMBER ON LID.
	LAWN ROTATOR	HUNTER	MP ROTATOR	MP1000, MP2000, MP3000	INSTALL PER DETAIL w/ 40 PSI AT BASE OF HEAD. INSTALL LASCO P-120T SWING JOINTS ON ALL SPRAY BODIES. INSTALL NOZZLES ON 4" PR540 OR 12" PROS-12 SPRAY BODIES.
	4" POP UP CORNER STRIP	HUNTER	STRIP SERIES	MPLC515 IVORY MPLR515 COPPER MPS5530 BROWN	INSTALL PER DETAIL w/ 40 PSI AT BASE OF HEAD. INSTALL NOZZLES ON 4" PR540 SPRAY BODIES.
	ROTOR HEAD	HUNTER	P&P SERIES	#6 NOZZLE #8 NOZZLE #10 NOZZLE	INSTALL PER DETAIL w/ 40 PSI AT BASE OF HEAD. INSTALL LASCO P-120T SWING JOINTS ON ALL ROTORS.
	WATER METER	----	PER CITY	Refer to Plan for Size	INSTALLED BY GENERAL CONTRACTOR
	DOUBLE CHECK VALVE	Felco	850-BV Series	Refer to Plan for Size	FURNISH AND INSTALL PER LOCAL CODE BY LICENSED IRRIGATION CONTRACTOR.
	ISOLATION VALVE	Nibco	*T-113	Line Size	INSTALL PER DETAIL IN 12"x11" PENTEK VALVE BOX WITH BOLT DOWN LID.
	WYE STRAINER	Felco	*850	Refer to Plan for Size	INSTALL PER DETAIL IN 12"x11" PENTEK VALVE BOX WITH BOLT DOWN LID.
	MASTER VALVE	Hunter	ICV-101S ICV-151S	Refer to Plan for Size	INSTALL PER DETAIL IN 12"x11" PENTEK VALVE BOX WITH BOLT DOWN LID.
	IRRIGATION SLEEVE	----	SCH. 40 w/ 1/2 GA. PULL WIRE IN SLEEVE	Refer to Plan for Size	DRIVEWAY SLEEVES INSTALLED BY GENERAL CONTRACTOR. SIDEWALK SLEEVES INSTALLED BY IRRIGATION CONTRACTOR.
	IRRIGATION MAIN LINE	----	SCH. 40	Refer to Plan for Size	18" INSTALLATION DEPTH.
	IRRIGATION LATERAL LINE	----	CLASS 200	Refer to Plan for Size	12" INSTALLATION DEPTH STANDARD. 18" INSTALLATION DEPTH UNDER PAVING.

	PROGRAM AND STATION NUMBER FOR AUTOMATIC CONTROLLER
	VALVE SIZE IN INCHES
	GALLONS PER MINUTE, PER VALVE

ZONE VALVES LABELED AS "OPEN" ARE INTENDED FOR THE USE OF SUPPLYING HUNTER AFB-ADJ TREE BUBBLERS ON EACH PROPOSED TREE. IRRIGATION CONTRACTOR SHALL FIELD VERIFY THAT THESE ZONES DO NOT EXCEED 20 GALLONS PER MINUTE. THE IRRIGATION CONTRACTOR SHALL STAKE EACH TREE BUBBLER HEAD LOCATION AND RECEIVE APPROVAL FROM THE OWNER AND/OR THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.



BACKFLOW AND RELATED COMPONENTS  
NOT TO SCALE



STUDIO 13  
DESIGN GROUP

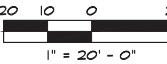
**Studio 13 Design Group, PLLC.**  
519 Bennett Lane, Suite 203  
Lewisville, Texas 75057  
469-635-1900



September 25, 2013



NORTH



Bar is one inch on original drawing. If not one inch on this sheet, adjust scale as necessary.



One Inch

## LANDSCAPE AND SCREENING

## Irrigation Plan

Emerus Emergency Hospital

City of Mansfield, Tarrant County, Texas

[illegible]

PROJECT

PWP007

SHEET

IR2 of 3

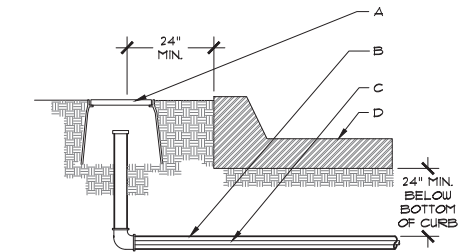
**Philo  
Wilke**  
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11275 S. Sam Houston Parkway W  
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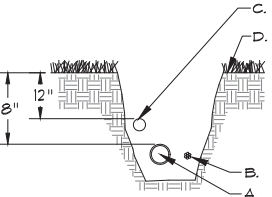


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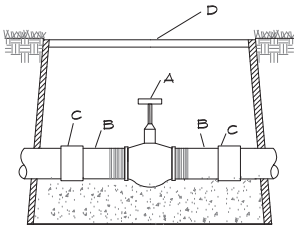
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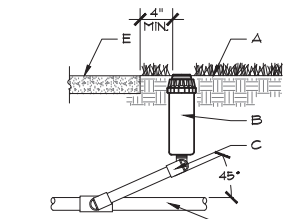
IRRIGATION SLEEVES  
NOT TO SCALE



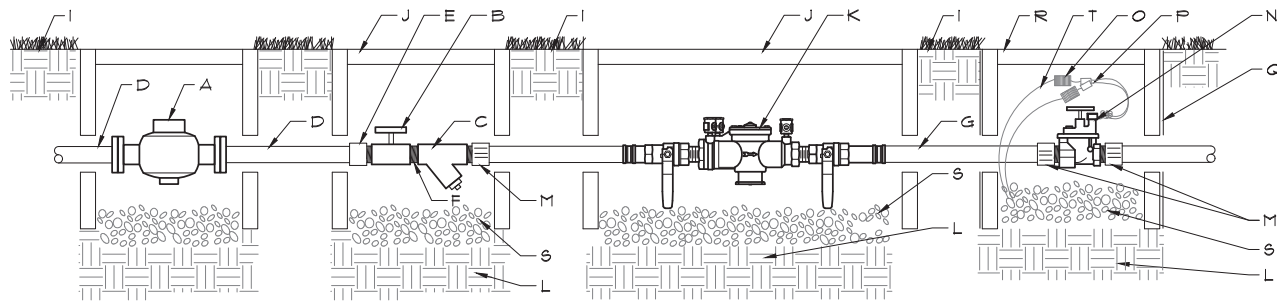
IRRIGATION TRENCH  
NOT TO SCALE



GATE VALVE  
NOT TO SCALE



ROTARY SPRAY HEAD  
NOT TO SCALE



BACKFLOW PREVENTER CONNECTION  
NOT TO SCALE

**GENERAL NOTES:**

1. NO DIRECT CONNECTION TO SLEEVE SHALL BE ALLOWED. SLEEVE SIZE SHALL BE TWO (2) SIZES LARGER THAN THE PIPE TO BE SLEEVED.
2. MARK HARDSCAPE WITH SYMBOL "S" TO INDICATE THAT A SLEEVE IS BELOW.
3. INSTALL WIRING IN SEPARATE SLEEVE FROM LATERAL AND MAINLINE PIPING.

**CONSTRUCTION NOTES:**

- A. CONCRETE VALVE BOX. STUB UP SCH. 40 P.V.C. SLEEVES AND CAP. PAINT TOP OF VALVE BOX "DAY GLOW ORANGE" FOR FUTURE REFERENCE.
- B. SCH. 40 P.V.C. IRRIGATION SLEEVE - SEE PLAN.
- C. P.V.C. MAINLINE, LATERAL OR WIRING - SEE PLAN.
- D. PAVING.

**GENERAL NOTES:**

1. REST PIPE FIRMLY ON TRENCH BOTTOM.
2. SNAKE PIPE FROM SIDE TO SIDE.
3. DO NOT STACK PIPE IN TRENCH. PROVIDE HORIZONTAL SEPARATION.
4. MAINTAIN 2" MINIMUM SEPARATION BETWEEN MAINLINE AND LATERAL LINE PIPING.
5. BUNDLE WIRE(S) AT 20 FT. INTERVALS.

**CONSTRUCTION NOTES:**

- A. MAINLINE PIPING - 18" MINIMUM COVER
- B. WIRE BUNDLE - TAPE PER SPECIFICATIONS
- C. LATERAL LINE PIPING - 12" MINIMUM COVER
- D. FINISH GRADE

**CONSTRUCTION NOTES:**

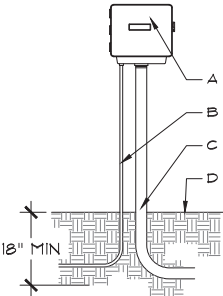
- A. GATE VALVE
- B. SCH. 80 TOE NIPPLE
- C. COUPLING
- D. 12"x12" VALVE BOX

**GENERAL NOTES:**

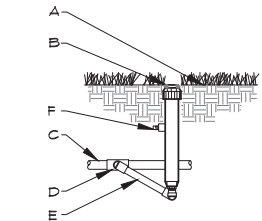
1. SET TOP OF HEAD FLUSH WITH FINISH GRADE
2. FLUSH PIPING PRIOR TO INSTALLING NOZZLE
3. SET HEAD OFFSET OF LATERAL AND MAINLINE PIPING

**CONSTRUCTION NOTES:**

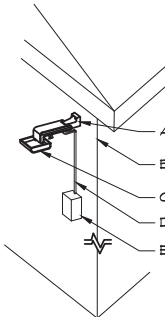
- A. FINISH GRADE
- B. ROTARY SPRAY HEAD
- C. 3/4" LASCO UNITIZED O-RING SWING JOINT ASSEMBLY
- D. LATERAL PIPING
- E. PAVING



WALL MOUNTED CONTROLLER  
NOT TO SCALE



SHRUB SPRAY HEAD  
NOT TO SCALE



RAIN SENSOR  
NOT TO SCALE

**GENERAL NOTES:**

1. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
2. INSTALL ELECTRICAL SERVICE PER LOCAL CODES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ELECTRICAL WORK RELATED TO IRRIGATION INSTALLATION.
4. ATTACH RAIN SENSOR WITH STAINLESS STEEL SCREWS 4'-0" MINIMUM ABOVE FINISH GRADE IN LOCATION APPROVED BY IRRIGATION CONSULTANT.
5. ATTACH TEMPERATURE SENSOR TO CONTROLLER WITH STAINLESS STEEL SCREWS IN LOCATION APPROVED BY IRRIGATION CONSULTANT.

**CONSTRUCTION NOTES:**

- A. WEATHERPROOF CONTROLLER, REFER TO PLAN FOR TYPE AND LOCATION. ATTACH TO WALL SECURELY WITH ANCHOR BOLTS.
- B. ELECTRIC SERVICE 1/2" CONDUIT.
- C. REMOTE ELECTRIC VALVE 2" CONDUIT.
- D. FINISH GRADE

**GENERAL NOTES:**

1. SET TOP OF HEAD FLUSH WITH FINISH GRADE

**CONSTRUCTION NOTES:**

- A. FINISH GRADE
- B. SPRINKLER HEAD (SEE PLAN)
- C. LATERAL PIPE
- D. SCH. 40 P.V.C. TEE
- E. SUPER BLUE FLEX ASSEMBLY
- F. PLUG

**GENERAL NOTES:**

1. LOCATE SENSOR ABOVE THE CONTROLLER AS APPROVED BY LANDSCAPE ARCHITECT
2. CONNECT SENSOR TO CONTROLLER PER MANUFACTURER'S SPECS.
3. MINIMUM 6' ABOVE GRADE

**CONSTRUCTION NOTES:**

- A. ATTACH TO WALL PER MANUFACTURER'S SPECS
- B. BUILDING
- C. RAINCHECK
- D. CONDUIT W/ FULL WIRE TO CONTROLLER BY OTHER TRADES
- E. J-BOX BY OTHER TRADES

**GENERAL NOTES:**

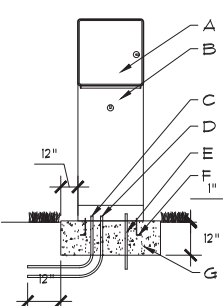
1. INSTALL WASHED PEA GRAVEL BELOW DCA TO ALLOW ACCESS TO TEST COCKS AND OPERATION OF BALL VALVES
2. INSTALL PEA GRAVEL FLUSH WITH ELECTRIC VALVE
3. PROVIDE A 24" WIRE EXPANSION COIL AT EACH DRY SPlice WIRE CONNECTION.
4. CENTER VALVE ASSEMBLY IN VALVE BOX.

**CONSTRUCTION NOTES:**

- A. WATER METER (SIZE PER PLAN)
- B. BALL VALVE (SIZE PER LINE)
- C. WYE STRAINER (SIZE PER LINE)
- D. TYPE "K" COPPER PIPE
- E. COPPER 5x1 COUPLING
- F. TBE NIPPLE
- G. PIPE PER CITY CODE
- H. COUPLING
- I. FINISH GRADE
- J. 12"x12" VALVE BOX. SET FLUSH WITH FINISH GRADE
- K. DOUBLE CHECK VALVE ASSEMBLY
- L. COMPACTED SUBGRADE
- M. MALE ADAPTER
- N. MASTER ELECTRIC VALVE
- O. WIRE COIL
- P. WATERPROOF WIRE CONNECTORS
- Q. 10 ML BLACK PLASTIC
- R. 10" RD. VALVE BOX. SET 1/4" ABOVE FINISH GRADE.
- S. WASHED PEA GRAVEL - 6" DEPTH MIN
- T. VALVE WIRING

**IRRIGATION NOTES**

1. PROVIDE A COMPLETE, FUNCTIONING AUTOMATIC IRRIGATION SYSTEM INCLUDING LABOR, MATERIALS, FEES, TAXES, EQUIPMENT, AND OTHER COSTS INCIDENTAL TO ACCOMPLISHING WORK.
2. ACQUIRE WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT OR LICENSED IRRIGATOR FOR MATERIAL SUBSTITUTES PRIOR TO BEGINNING INSTALLATION.
3. FORTY EIGHT (48) HOURS BEFORE IRRIGATION CONSTRUCTION BEGINS, IRRIGATION CONTRACTOR MUST CALL (800) DEG-TESS AND IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND UTILITIES AND/OR OBSTACLES PRIOR TO BEGINNING WORK. ANY DAMAGE TO UTILITIES AND/OR FINISHES FROM INFERIOR WORKMANSHIP BY THE IRRIGATION CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER.
4. PIPING IS DIAGRAMMATIC AND SHOWN FOR CLARITY ONLY. ADJUST AS REQUIRED FOR EXISTING UTILITIES, OBSTRUCTIONS, TREE ROOT BALLS, ETC. PIPING AND VALVES SHOWN IN PAVING FOR CLARITY ONLY AND SHALL BE INSTALLED IN ADJACENT LANDSCAPE AREA.
5. COORDINATE SLEEVE AND CONDUIT REQUIREMENTS WITH GENERAL CONTRACTOR. IRRIGATION SLEEVES SHALL BE AS FOLLOWS:
  - 5.1. SLEEVES INTENDED FOR LATERAL LINES ARE TO BE ONE-FOUR INCH SLEEVE AND ARE TO BE NO MORE THAN A DEPTH OF TWO FEET BELOW TOP OF CURB. SLEEVES SHOULD EXTEND A MINIMUM OF 2'-0" BEYOND BACK OF CURB.
  - 5.2. SLEEVES INTENDED FOR THE 2" MAINLINE ARE TO BE TWO-FOUR INCH SLEEVES SIDE BY SIDE AND ARE TO BE NO MORE THAN A DEPTH OF TWO FEET BELOW TOP OF CURB. SLEEVES SHOULD EXTEND A MINIMUM OF 2'-0" BEYOND BACK OF CURB.
6. LOCATE EACH END OF IRRIGATION SLEEVES DIMENSIONALLY ON THE RECORD "AS BUILT" DRAWINGS.
7. THE IRRIGATION CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE IRRIGATION SYSTEM WITH THE LANDSCAPE CONTRACTOR TO ENSURE ALL PLANT MATERIAL WILL BE WATERED IN ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS.
8. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO PLANT MATERIAL DUE TO SYSTEM FAILURE FROM INFERIOR WORKMANSHIP FOR THE DURATION OF THE INSTALLATION OF PLANT MATERIAL AND MAINTENANCE PERIOD FOLLOWING INSTALLATION.
9. THE IRRIGATION CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL NECESSARY TO HAND DIG WITHIN ALL EXISTING TREE DRIFLINE ZONES AT NO ADDITIONAL COST TO THE OWNER. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE TO STAKE AND RECEIVE APPROVAL FROM ALL DISCIPLINES PRIOR TO AN TRENCHING AND HAND DIGGING IN AREAS OF EXISTING TREE COVERAGE OR ANY ADDITIONAL AREAS THAT MIGHT BE QUESTIONABLE.
10. EXTEND ONE EXTRA CONTROL WIRE TO FARTHEST VALVE, ROUTED PARALLEL TO COMMON GROUND WIRE WITH INSTALLATION OF LEAD AND COMMON WIRES.
11. CONTROL WIRE SHALL BE DIRECT BURIAL, 24 VOLT, SINGLE CONDUCTOR, SOLID COPPER, PLASTIC INSULATED CABLE, RATED FOR DIRECT BURIAL APPLICATIONS, UF-, UL-, APPROVED, 14 GAUGE MINIMUM LEAD AND COMMON GROUND RETURN WIRE UNLESS NOTED OTHERWISE ON PLANS. COLOR OF INSULATION AS FOLLOWS:
  - 11.1. LEAD WIRE: ANY COLOR (SAME COLOR), EXCEPT WHITE OR ORANGE
  - 11.2. COMMON GROUND WIRE: WHITE (COLOR)
  - 11.3. EXTRA CONTROL WIRE: ORANGE (COLOR)
12. WIRE SPLICES SHALL BE KING ONE-STEP #1 (TAN) OR 3M-DBY PERMANENT AND WATERPROOF. INSTALL ALL WIRE SPLICES IN 10" ROUND PENTEK VALVE BOXES.
13. THE OWNER AND/OR LANDSCAPE ARCHITECT SHALL DETERMINE THE FINAL CONTROLLER LOCATION. THE IRRIGATION CONTRACTOR SHALL MAKE FINAL ELECTRICAL CONNECTION OF CONTROLLER PER LOCAL ELECTRICAL CODE. PROVIDE ALL NECESSARY FUSE BOXES, CONDUIT, FITTINGS, CONNECTORS OR OTHER ELECTRICAL DEVICES TO MAKE CONNECTION. OWNER SHALL PROVIDE ELECTRICAL SERVICE WITHIN 10 LINEAR FEET OF CONTROLLER LOCATION UNLESS NOTED OTHERWISE ON DRAWINGS.
14. CONNECT REMOTE SENSORS TO CONTROLLER WITH GROUND WIRE IN SERIES PRIOR TO CONNECTING TO REMOTE CONTROL VALVES.
15. ALL P.V.C. MAINLINES AND LATERAL LINES SHALL RECEIVE AS FOLLOWS:
  - 15.1. 18" MINIMUM COVER FOR MAIN LINES
  - 15.2. 18" MINIMUM COVER FOR PIPING LOCATED UNDER PAVING
  - 15.3. 12" MINIMUM COVER FOR LATERAL LINES
16. THE MINIMUM DISTANCE BETWEEN THE MAINLINE AND LATERAL LINE FITTINGS (EXCEPT FOR REDUCER BUSHINGS) SHALL BE 18".
17. THE MINIMUM HORIZONTAL DISTANCE OF 36" SHALL BE MAINTAINED BETWEEN ANY VALVES THAT ARE INSTALLED SIDE BY SIDE.
18. WHERE SERVICE TREES ARE INSTALLED ON THE MAINLINE FOR INSTALLATION OF THE ELECTRIC VALVES AND/OR QUICK COUPLING VALVES, THE CONTRACTOR SHALL LIMIT THE NUMBER OF THESE PER SERVICE TEE. DO NOT INSTALL MORE THAN A TOTAL OF EITHER THREE ELECTRIC VALVES OR A COMBINATION OF TWO ELECTRIC VALVES AND ONE QUICK COUPLER VALVE AT EACH TEE. THE MINIMUM DISTANCE BETWEEN FITTINGS SHALL BE 18" AS REFERENCED IN THE ABOVE NOTES.
19. ALL P.V.C. PIPE AND FITTINGS ARE TO BE PRIMED WITH PURPLE P.V.C. PRIMER SOLVENT BEFORE APPLYING P.V.C. CEMENT IN ACCORDANCE WITH THE UNIFORM PLUMBING CODE.
20. INSTALL QUICK COUPLING VALVES IN 12"x12" PENTEK VALVE BOXES PER DETAIL SHOWN. CONNECT QUICK COUPLING VALVES TO MAINLINE PIPE WITH LASCO UNITIZED, O-RING SWING JOINTS PER DETAIL SHOWN, #TT22-22. SUPPLY OWNER WITH THREE COUPLER KEYS WITH SWIVEL HOSE BIBB EACH, #33DK-10 AND #SH-O RESPECTIVELY. VALVES TO BE INSTALLED SO THAT THE TOP OF THE QUICK COUPLER IS 2" BELOW BOTTOM OF VALVE BOX LID. PURPLE LID SHALL READ "NON-POTABLE, NOT SAFE FOR DRINKING" IN ENGLISH AND SPANISH.
21. ALL LATERAL LINES SHALL BE 3/4" CLASS 200 P.V.C. UNLESS OTHERWISE NOTED ON PLANS.
22. ZONE VALVES LABELED AS "OPEN" ARE INTENDED FOR THE USE OF SUPPLYING HUNTER AFB-ADJ TREE BUBBLERS ON EACH PROPOSED TREE. IRRIGATION CONTRACTOR SHALL FIELD VERIFY THAT THESE ZONES DO NOT EXCEED 20 GALLONS PER MINUTE. THE IRRIGATION CONTRACTOR SHALL STAKE EACH TREE BUBBLER HEAD LOCATION AND RECEIVE APPROVAL FROM THE OWNER AND/OR THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
23. ALL STATE OF TEXAS LAWS/RULES AND ALL LOCAL CODES/ORDINANCES AREA MADE PART OF THESE PLANS AND SPECIFICATIONS WHETHER SHOWN OR NOT. THESE LAWS AND ORDINANCES WILL SUPERCEDE THE PLANS, DETAILS, AND/OR SPECIFICATIONS FOR THIS PROJECT. THE IRRIGATION CONTRACTOR IS CAUTIONED THAT HE/SHE IS TO INCLUDE ANY AND ALL COST NECESSARY TO MEET OR EXCEED THE LAWS OF THE STATE OF TEXAS AND LOCAL CODES CONCERNING LANDSCAPE IRRIGATION.



PEDESTAL MOUNTED CONTROLLER  
NOT TO SCALE

**GENERAL NOTES:**

1. INSTALL ELECTRICAL WIRING PER LOCAL CODES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK.
3. PROVIDE DRAINAGE AWAY FROM BASE OF PEDESTAL.
4. GROUND IRRIGATION BOXES WITH GROUNDING ROD PER N.E.C.
5. INSTALL TEMPERATURE SENSOR TO NORTH SIDE OF CONTROLLER PEDESTAL W/ STAINLESS STEEL SCREWS

**CONSTRUCTION NOTES:**

- A. CONTROLLER
- B. PEDESTAL
- C. ELECTRICAL SERVICE CONDUIT
- D. REMOTE CONTROL VALVE WIRING CONDUIT
- E. GROUNDING ROD(S) PER MANUFACTURER'S REQUIREMENTS
- F. ANCHOR BOLTS
- G. CONCRETE BASE, 3,000 PSI

PLAN REVIEW REVISIONS	DATE	BY	DATE
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