

CIVIL & LANDSCAPE PLANS FOR CONSTRUCTION OF  
PAVING, STREETScape & UTILITY IMPROVEMENTS

# QUORUM DRIVE

JANUARY 15, 2009

OWNER:

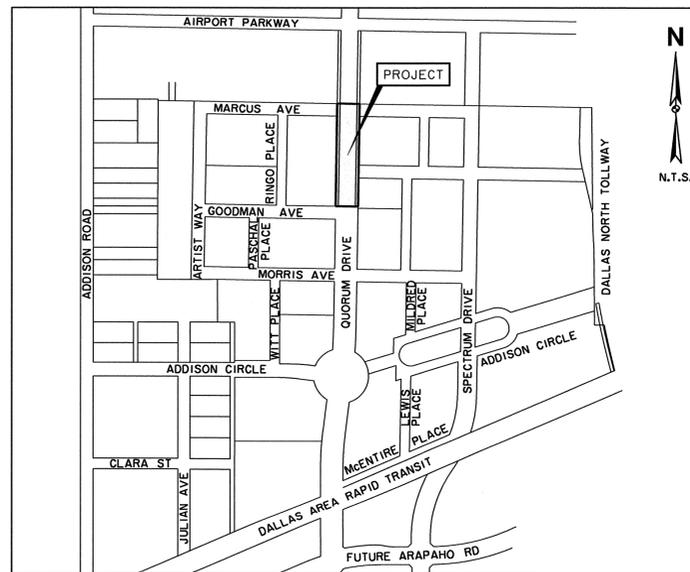
FAIRFIELD RESIDENTIAL, LLC  
2045 N. HIGHWAY 360, SUITE 250  
GRAND PRAIRIE, TEXAS 75050  
(817) 307-8060

ENGINEER:

HUITT-ZOLLARS, INC.  
3131 MCKINNEY AVE., SUITE 600  
DALLAS, TEXAS 75204  
(214) 871-3311 FAX (214) 871-0757  
KEVIN N. CARLSON, P.E.  
email: kcarlson@huitt-zollars.com  
TX. REG. NO. 89232

RECORD DRAWING

THIS DRAWING HAS BEEN MODIFIED FROM THE ORIGINAL TO SHOW ONLY THE FIELD CHANGES AND ADJUSTMENTS MADE DURING CONSTRUCTION BY THE CONTRACTOR WHICH WERE DOCUMENTED AND FURNISHED TO THE ENGINEER FOR THE PURPOSE OF PREPARING THESE RECORD DRAWINGS. FIELD INSPECTION OF CONSTRUCTION WAS PERFORMED BY OTHERS. TO THE BEST OF OUR KNOWLEDGE AND UNDERSTANDING THESE RECORD DRAWINGS REPRESENT THE "AS-BUILT" CONDITIONS.



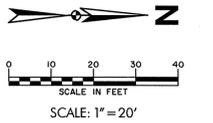
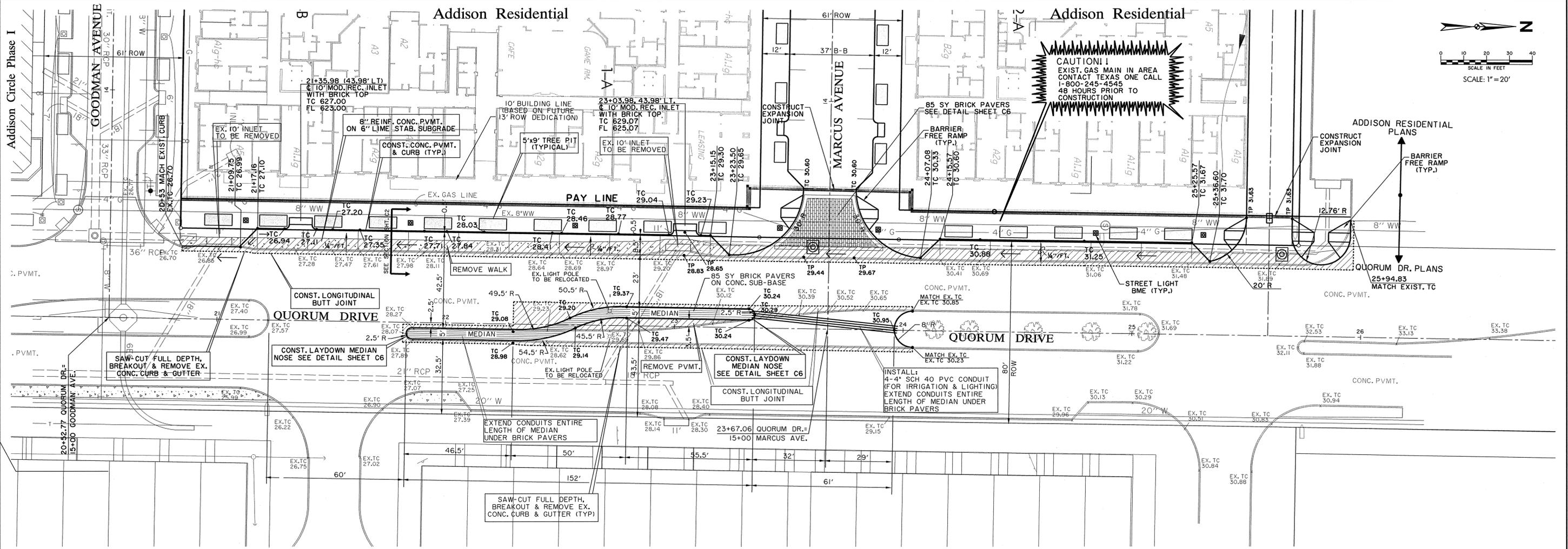
LOCATION MAP

SHEET NO.	INDEX OF DRAWINGS
C1	COVER SHEET
C2	PAVING TYPICAL SECTIONS
C3	RECOMMENDED UTILITY LOCATIONS
C4	SIGNAGE & STRIPING PLAN
C5	PAVING & GRADING PLAN
C6	PAVING DETAILS
C7	STREETScape PLAN
C8, C9	STREETScape, LIGHT & SUBDRAIN DETAILS
C10	DRAINAGE AREA MAP
C11	STORM WATER PLAN & PROFILE
C12, C13	STORM WATER DETAILS
C14	WATER & WASTEWATER PLAN
C14a, C14b	WATER & WASTEWATER PROFILES
C15, C16	WATER DETAILS
C17, C17a	WASTEWATER DETAILS
C18	POLLUTION CONTROL PLAN
C19	POLLUTION CONTROL DETAILS
C20	ELECTRICAL PLAN (NOT IN THIS SET, SEE ADDISON RESIDENTIAL PLANS)
C20a	ELECTRICAL SYMBOLS, NOTES & SCHEDULES (NOT IN THIS SET, SEE ADDISON RESIDENTIAL PLANS)
C21	PLANTING & FURNITURE PLAN (WITH PLANTING DETAILS)
C22	IRRIGATION PLAN
C23	TOWN OF ADDISON IRRIGATION SPECS.
C24	IRRIGATION DETAILS









**CAUTION!**  
 EXIST. GAS MAIN IN AREA  
 CONTACT TEXAS ONE CALL  
 1-800-245-4545  
 48 HOURS PRIOR TO  
 CONSTRUCTION

- BENCHMARKS:**
- BM\*5**  
 "□" CUT ON 8" INLET ON NORTH CURB LINE OF GOODMAN AVE. +75' EAST OF PASCHAL PLACE. ELEV. 629.98
  - BM\*6**  
 "□" CUT AT C OF 8" INLET AT THE SOUTHWEST CORNER OF MORRIS AVE. AND WITT PLACE. ELEV. 627.29
  - BM\*7**  
 "□" CUT AT WEST CORNER OF ADDISON THEATRE CENTRE PARKING LOT, SECOND ENTRANCE NORTH OF ADDISON RD. ELEV. 637.66



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PAVING AND GRADING PLAN						
QUORUM DRIVE						
TOWN OF ADDISON, TEXAS						
HUIIT - 2010, Inc. 3131 McKinney Ave., Suite 600, Dallas, TX 75204 Phone (214) 871-3311/Fax (214) 871-0757						
DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.	NO.
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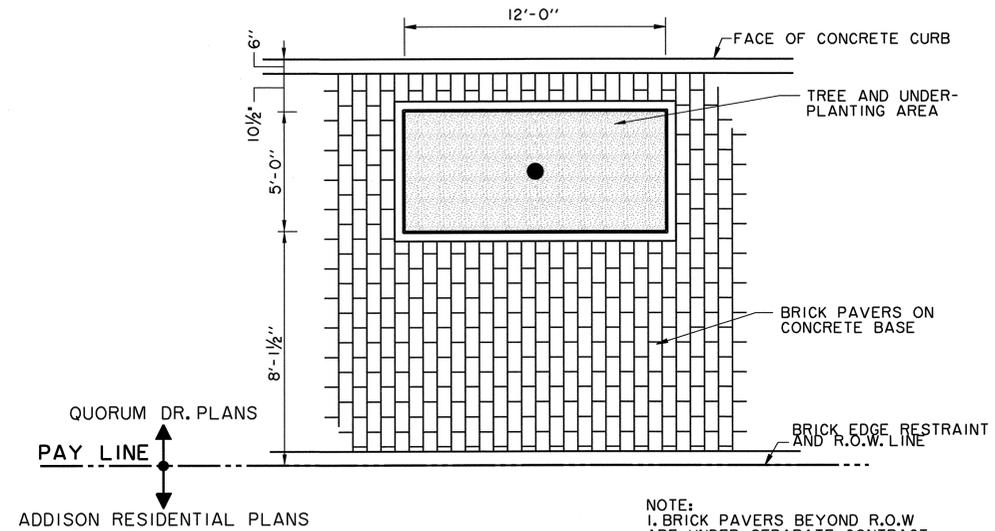
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 PLOT TIME: 10:00:00  
 PLOT USER: kcarlsson  
 PLOT DEVICE: HP DesignJet 5000





**GENERAL NOTES CONCRETE SUBBASE FOR SIDEWALKS**

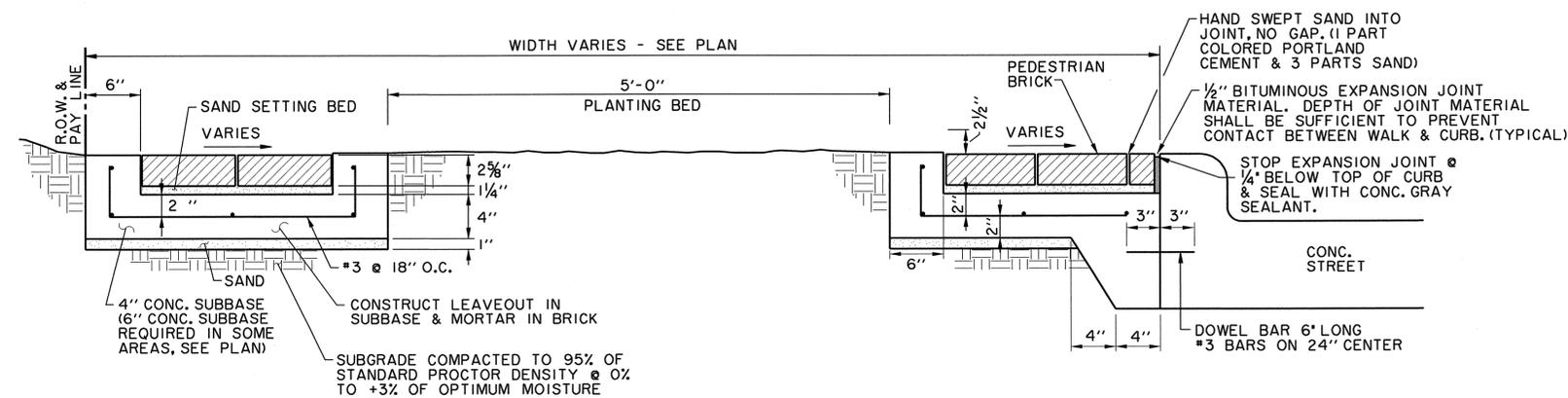
1. REINFORCED CONCRETE SIDEWALK SHALL BE A MINIMUM OF FOUR (4) INCHES THICK AND SHALL BE 3000 PSI AT 28 DAYS (5 SACK MIX) UNLESS NOTED OTHERWISE.
2. ALL BAR DIMENSIONS ARE GIVEN AS CENTER TO CENTER OF BARS AND ARE LOCATED AS SHOWN.
3. ALL REINFORCING STEEL SHALL BE NO. 3 ON 18" CENTERS LONGITUDINALLY, 18" CENTERS TRANSVERSELY AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-615, GRADE 60.
4. 1" THICK MIN. FINE WASHED SAND CUSHION SHALL BE FREE FROM ORGANIC MATERIALS OR CLAYS AND SHALL BE USED FOR GRADE ADJUSTMENT.
5. SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 95% OF STANDARD PROCTOR DENSITY AT 0 TO +3% OF OPTIMUM MOISTURE.
6. TOOLED JOINTS (CONTRACTION JOINTS) SHALL BE ON FIVE (5) FOOT CENTERS AND SHALL BE ROUND ONE-FOURTH (1/4) INCH RADIUS.



NOTE:  
 1. BRICK PAVERS BEYOND R.O.W. ARE UNDER SEPARATE CONTRACT.  
 2. SEE PAVING DETAILS SHEET C6 FOR TYPE, SIZE AND COLOR OF PAVERS. VERIFY BRICK PAVER PATTERN WITH THE TOWN OF ADDISON.

**TREE PIT PLAN (QUORUM DRIVE)**  
N.T.S.

PEDESTRIAN BRICK 'A' - 2 5/8" x 3 1/2" x 7 1/2" ACME (EUREKA-231 BLEND)



**BRICK SIDEWALK INSTALLATION IN PEDESTRIAN AREA**  
N.T.S.



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<b>STREETScape DETAILS</b>						
<b>QUORUM DRIVE</b>						
<b>TOWN OF ADDISON, TEXAS</b>						
Hull - Zellers, Inc. 3131 McKinney Ave., Suite 600, Dallas, TX 75204 Phone (214) 871-3311/Fax (214) 871-0757						
DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.	NO.
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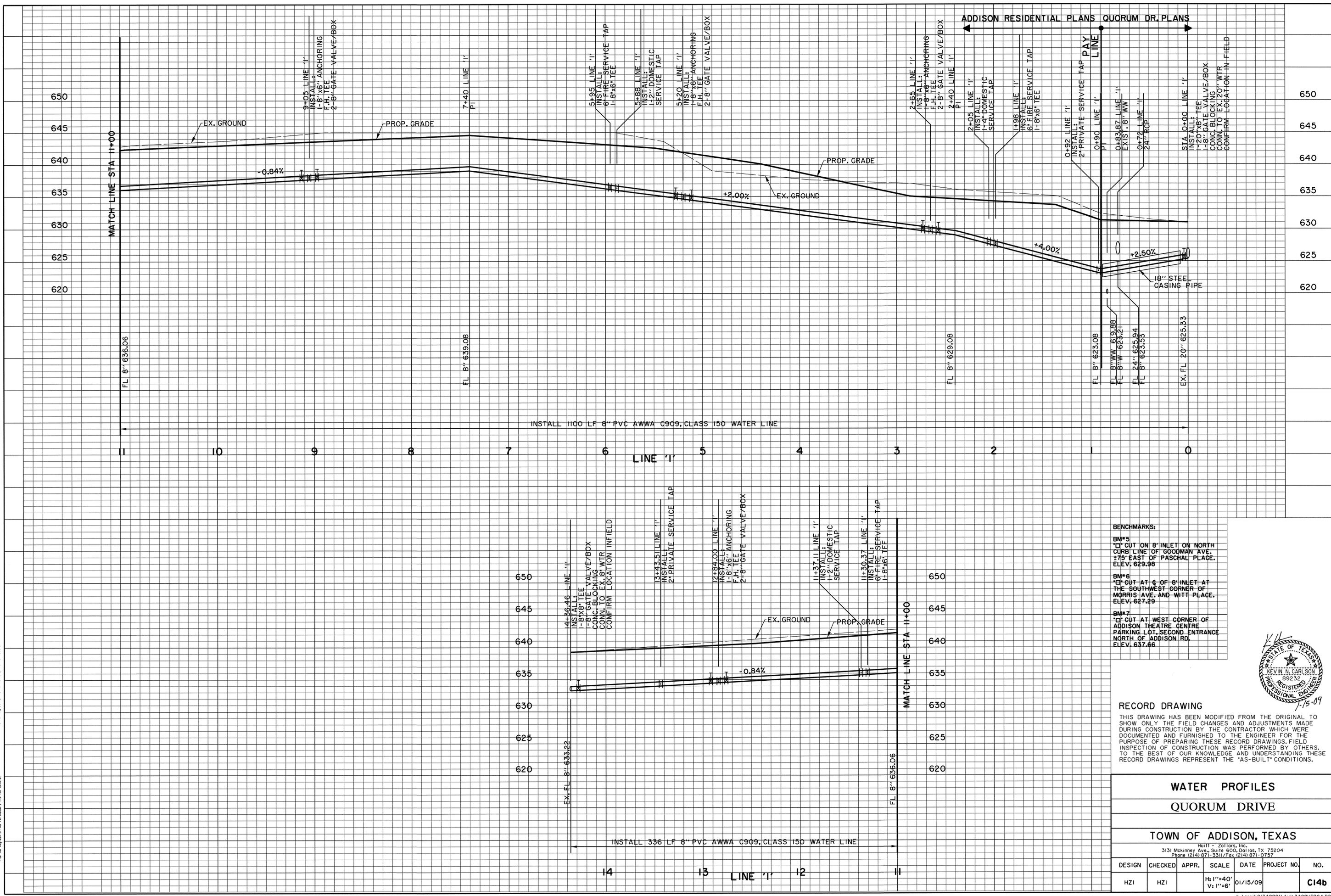




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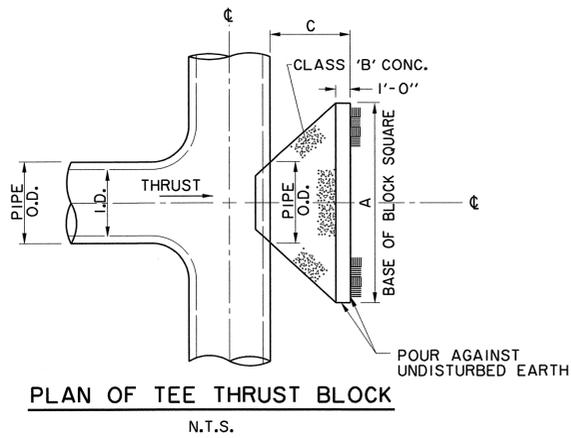
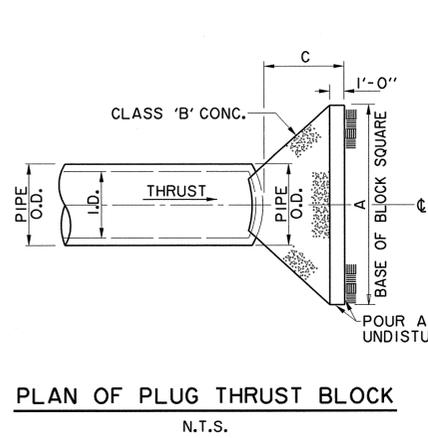
**BENCHMARKS:**  
 BM#5  
 TYP CUT ON 8" INLET ON NORTH CURB LINE OF GOODMAN AVE. 175' EAST OF PASCHAL PLACE. ELEV. 629.98  
 BM#6  
 TYP CUT AT E OF 8" INLET AT THE SOUTHWEST CORNER OF MORRIS AVE. AND WITT PLACE. ELEV. 627.29  
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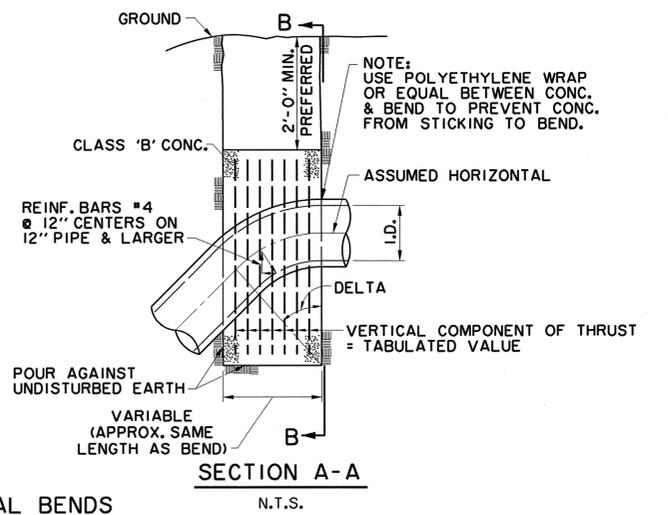
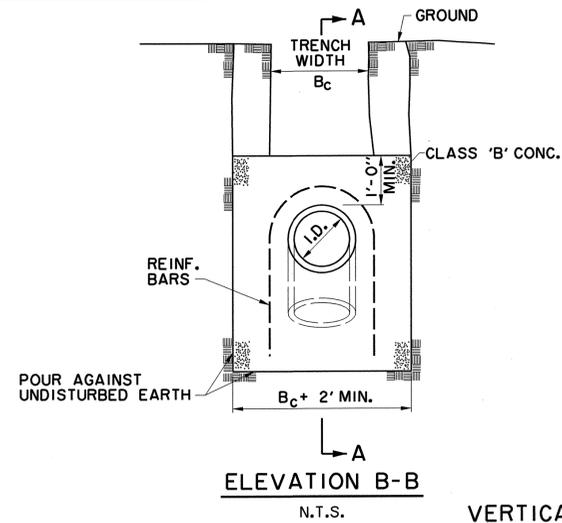
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<b>WATER PROFILES</b>						
<b>QUORUM DRIVE</b>						
<b>TOWN OF ADDISON, TEXAS</b>						
<small>HUTT - Zellers, Inc.          3131 McKinney Ave., Suite 600, Dallas, TX 75204          Phone (214) 871-3311/Fax (214) 871-0757</small>						
DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.	NO.
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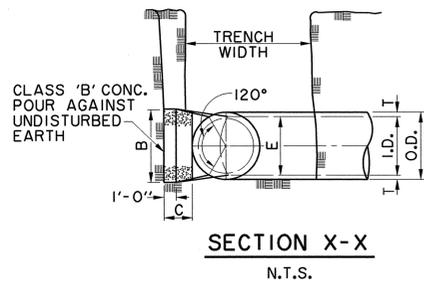
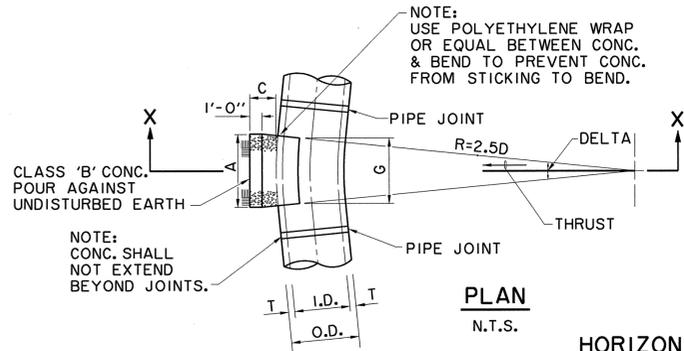
I.D. (IN.)	THRUST TONS	C. FT.	EARTH		ROCK	
			A. FT.	VOL. C.Y.	A. FT.	VOL. C.Y.
4, 6, 8	5.1	1.5	2.5	0.3	2.0	0.2
10, 12	11.3	1.5	3.5	0.6	2.5	0.3
16, 18	25.5	2.0	5.5	1.6	4.0	0.9
24	45.2	2.5	7.0	3.1	5.0	1.7



I.D. (IN.)	THRUST TONS	VOL. C.Y.	22.50°		30°		45°		67.50°		90°		I.D. (IN.)
			THRUST TONS	VOL. C.Y.	THRUST TONS	VOL. C.Y.	THRUST TONS	VOL. C.Y.	THRUST TONS	VOL. C.Y.	THRUST TONS	VOL. C.Y.	
4, 6, 8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4, 6, 8
10, 12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10, 12
16, 18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16, 18
24	8.2	4.4	17.3	8.7	22.6	11.3	32.0	16.0	41.9	20.9	45.2	22.6	24

**GENERAL NOTES FOR ALL THRUST BLOCKS**

- ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 P.S.I. FOR 24" I.D. PIPE AND SMALLER AND 150 P.S.I. ON 30" I.D. AND LARGER.
- VOLUMES OF VERTICAL BEND THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS F) IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THRUST ON THE VERTICAL BEND.
- WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
- CONCRETE FOR BLOCKING SHALL BE CLASS B CONCRETE.
- DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
- CONCRETE BLOCKING SHALL BE IN PLACE A MINIMUM OF 4 DAYS PRIOR TO TESTING THE PIPELINE.



**HORIZONTAL BENDS**

I.D. (IN.)	T. IN.	C 11.25° FT.	C 22.50°+ FT.	E. FT.	DELTA	11.25°						22.50°						DELTA		
						EARTH		ROCK		EARTH		ROCK								
4, 6, 8	0.4	1.0	1.0	0.9	0.4	1.0	1.0	0.1	1.0	1.0	0.1	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1	4, 6, 8
10, 12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	1.0	1.5	0.1	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	10, 12
16, 18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	1.6	2.0	0.2	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3	16, 18
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	2.2	3.0	0.3	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5	24
DELTA						45°						90°						DELTA		
4, 6, 8	0.4	3.9	2.0	2.0	0.2	1.5	1.5	0.1	0.4	5.0	5.0	1.5	0.4	2.0	2.0	0.2	2.0	2.0	0.2	4, 6, 8
10, 12	0.5	8.7	3.5	2.5	0.5	2.0	2.5	0.3	0.5	6.5	2.5	1.0	3.5	2.5	0.5	0.5	3.5	2.5	0.5	10, 12
16, 18	0.6	19.5	4.5	4.5	1.2	3.0	3.5	0.6	0.6	9.0	9.0	4.0	2.4	4.5	4.0	1.0	4.5	4.0	1.0	16, 18
24	0.9	34.6	8.0	4.5	2.3	4.5	4.0	1.1	0.9	14.5	14.5	4.5	5.0	8.0	4.0	2.1	8.0	4.0	2.1	24

**GENERAL NOTES**

- UNPLASTICIZED POLYVINYL CHLORIDE (PVC) WATER PIPE SHALL MEET OR EXCEED REQUIREMENTS OF AWWA C909 PVC PIPE WITH CAST IRON OUTSIDE DIMENSIONS. PIPE SHALL BE LISTED BY UNDERWRITER LABORATORIES AND SHALL BE APPROVED FOR USE IN CITIES AND TOWNS OF THE STATE OF TEXAS BY THE STATE BOARD OF INSURANCE.
- PVC WATER PIPE SHALL BE FURNISHED WITH A RUBBER RING AT EACH JOINT AND AN INTEGRAL THICKENED BELL AS A PART OF EACH JOINT. THE PIPE CLASS SHALL BE MINIMUM CLASS 150 DR 18 WHICH REFERS TO THE MAXIMUM HYDROSTATIC PRESSURE IN NORMAL OPERATIONS. LAYING LENGTHS SHALL BE 20 FEET+/- . PIPE AND FITTINGS MUST BE ASSEMBLED WITH A NONTOXIC LUBRICANT.
- FITTINGS FOR PVC WATER PIPE SHALL BE GRAY IRON OR DUCTILE IRON OF THE BELL AND SPIGOT, OR MECHANICAL JOINT TYPE AND SHALL BE CLASS 250 IN ACCORDANCE WITH AWWA C110-77 (ANSI.10).
- UNLESS OTHERWISE SPECIFIED ON PLANS OR SHOWN IN PROFILES, PVC WATER PIPE SHALL BE INSTALLED TO CLEAR ALL UTILITY LINES AND SHALL HAVE A MINIMUM COVER OF 36 INCHES BELOW THE LOWEST GRADE OF THE STREET AS PER CITY CODE.
- 4'-12" R S GATE VALVES SHALL BE IN ACCORDANCE WITH AWWA STANDARD C-500.
- A PERMANENTLY ATTACHED VALVE EXTENSION STEM SHALL BE REQUIRED FOR ANY VALVE WHOSE OPERATING NUT IS LOCATED IN EXCESS OF 4 FEET BELOW THE TOP OF VALVE BOX. THIS EXTENSION SHALL BE OF SUFFICIENT LENGTH TO INSURE THAT ITS TOP IS WITHIN 4' OF VALVE BOX LID.
- DUCTILE IRON OR C-900 PVC PIPE SHALL BE USED FOR VALVE STACKS WITH VALVE BOX CASTING.
- ALL ANCHOR BOLTS SHALL BE GALVANIZED.
- ALL WATER MAINS WILL BE INSTALLED WITH A LOCATION WIRE PER THE TOWN OF ADDISON REQUIREMENTS.
- POLYWRAP ALL IRON FITTINGS AND VALVES.

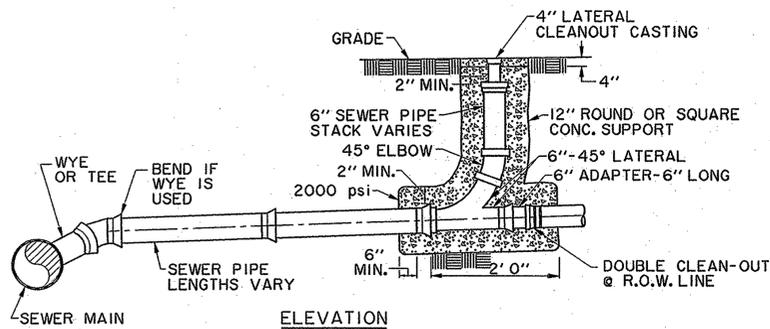
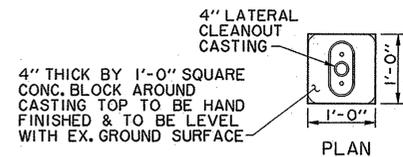


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<b>WATER DETAILS</b>					
<b>QUORUM DRIVE</b>					
<b>TOWN OF ADDISON, TEXAS</b>					
<small>Hull - Zellers, Inc. 3131 McKinney Ave., Suite 600, Dallas, TX 75204 Phone (214) 871-3311/Fax (214) 871-0757</small>					
DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.
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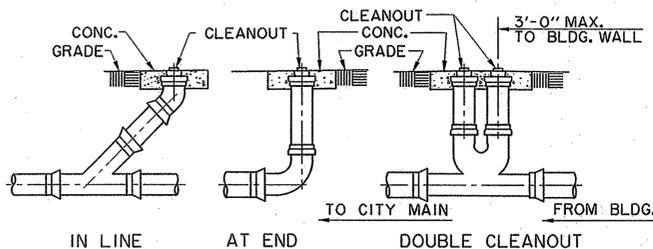




**SANITARY SEWER CLEANOUT DETAIL**  
NTS

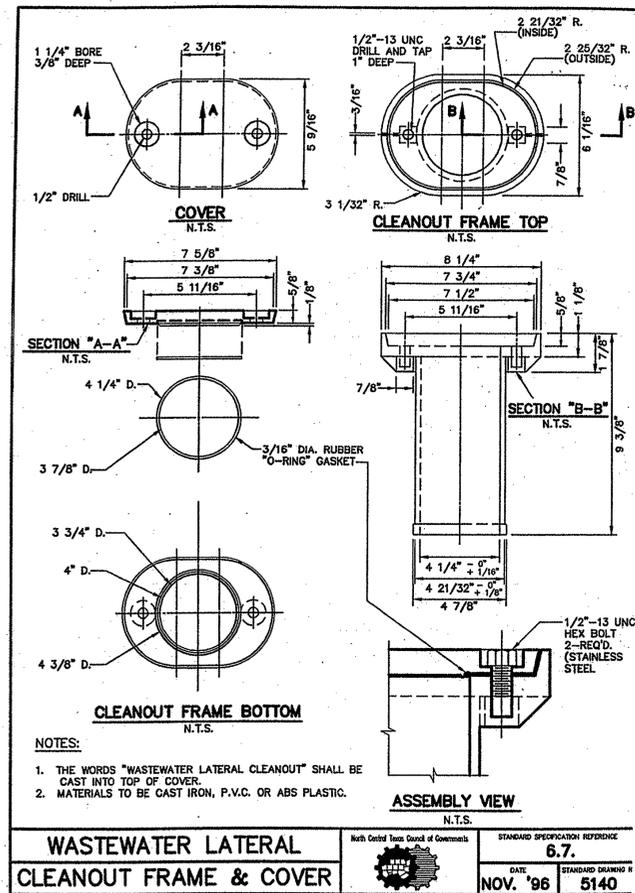
PVC SANITARY SEWER PIPE TO BE SDR 35 OR SDR 26 (AS NOTED ON PLANS) WITH INTEGRAL BELL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD LOCATE HORIZONTALLY EACH SERVICE IN RELATION TO THE SANITARY SEWER STATIONING.

FIELD TIES ARE TO BE INCLUDED & RECORDED ON ALUMINIZED SANITARY SEWER TAPE. THIS TAPE, GREEN OR RED IN COLOR IS TO BE ATTACHED TO THE 6" SERVICE AT THE R.O.W. LINE AND BROUGHT TO THE SURFACE TO BE USED AS A PERMANENT MARKER.



**TYPICAL CLEANOUTS**

USE CLASS 2 EMBEDMENT UNLESS OTHERWISE NOTED

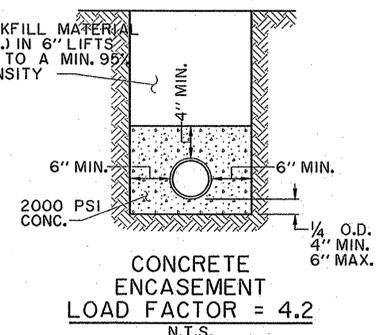
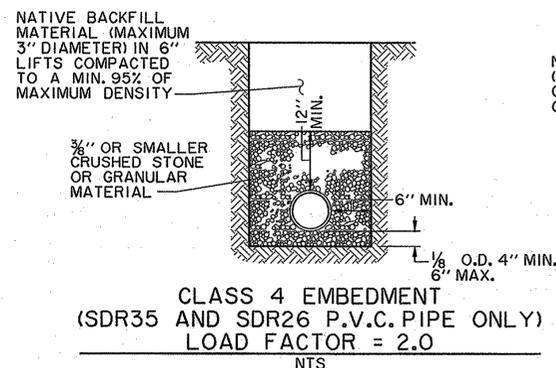
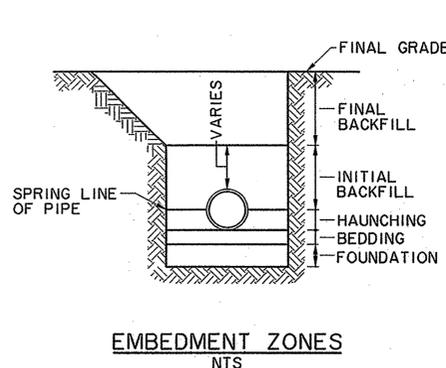
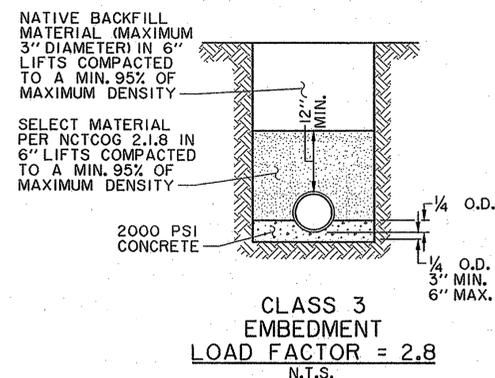
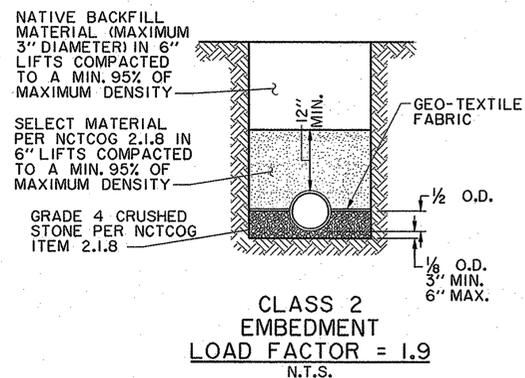
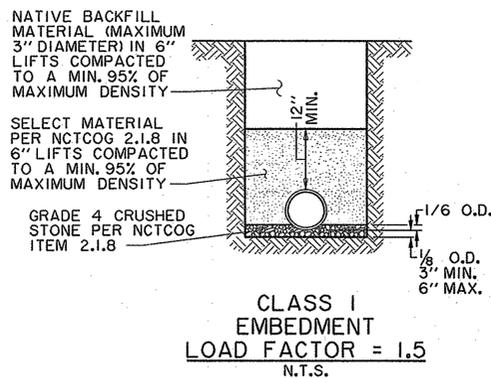


**EMBEDMENT DETAILS FOR SANITARY SEWER**

TABLE OF QUANTITIES OF 2000 psi CONCRETE, GRAVEL OR CRUSHED STONE IN CUBIC YARDS PER 100 LINEAR FEET FOR EACH CLASS EMBEDMENT

TABLE OF QUANTITIES PER 100 LINEAR FEET REINFORCED CONCRETE PIPE							
SIZE OF PIPE IN INCHES I.D.	O.D. OF PIPE IN INCHES	TRENCH WIDTH IN INCHES	TRENCH WIDTH IN FEET	CLASS 1 EMBEDMENT CRUSHED STONE	CLASS 2 EMBEDMENT CONCRETE	CLASS 3 EMBEDMENT CONCRETE	CONCRETE ENCASEMENT
12	16.00	32	2.67	4.1	6.5	4.8	15.8
15	19.50	36	3.00	4.8	7.8	6.4	19.2
18	23.00	39	3.25	5.7	9.2	8.2	21.2
21	26.50	43	3.58	6.9	11.0	10.2	24.9
24	30.00	46	3.83	8.3	13.1	12.4	28.7
27	33.50	51	4.25	10.3	16.1	14.4	32.8
30	37.00	57	4.75	12.7	20.1	17.0	34.8
33	40.50	62	5.17	15.1	23.8	19.3	39.2
36	44.00	67	5.58	18.0	28.6	22.1	43.8

TABLE OF QUANTITIES PER 100 LINEAR FEET-PVC PIPE (IN CUBIC YARDS)					
SIZE OF PIPE IN INCHES I.D.	O.D. OF PIPE IN INCHES	TRENCH WIDTH IN INCHES	TRENCH WIDTH IN FEET	CLASS 4 EMBEDMENT CRUSHED STONE	CONCRETE ENCASEMENT
6	6.28	24	2.00	8.0	11.7
8	8.16	24	2.00	8.7	12.4
10	10.20	26	2.18	10.2	14.2
12	12.24	28	2.35	11.7	15.9
16	15.30	31	2.61	14.0	18.8
24		36	3.0		
30		42	3.5		



TYPICAL NATIVE MATERIAL COMPACTED TO: 95% OF STANDARD PROCTOR DENSITY @ OPTIMUM MOISTURE 0 TO +3% UNDER PVMT. 95% OF STANDARD PROCTOR DENSITY @ OPTIMUM MOISTURE 0 TO +3% OUTSIDE CURB LINES JETTING IS NOT ALLOWED BACKFILL TO BE COMPACTED IN 6"+/- LIFTS. TYPICAL NATIVE MATERIAL (MAX. 3" DIA.)



**RECORD DRAWING**

THIS DRAWING HAS BEEN MODIFIED FROM THE ORIGINAL TO SHOW ONLY THE FIELD CHANGES AND ADJUSTMENTS MADE DURING CONSTRUCTION BY THE CONTRACTOR WHICH WERE DOCUMENTED AND FURNISHED TO THE ENGINEER FOR THE PURPOSE OF PREPARING THESE RECORD DRAWINGS. FIELD INSPECTION OF CONSTRUCTION WAS PERFORMED BY OTHERS. TO THE BEST OF OUR KNOWLEDGE AND UNDERSTANDING THESE RECORD DRAWINGS REPRESENT THE "AS-BUILT" CONDITIONS.

WASTEWATER DETAILS							
QUORUM DRIVE							
TOWN OF ADDISON, TEXAS							
Hull - Zellers, Inc. 3131 McKinney Ave., Suite 600, Dallas, TX 75204 Phone (214) 871-3311/Fax (214) 871-0757							
DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.	NO.	
HZ1	HZ1		N.T.S.	01/15/09		C170	









# Town of Addison Irrigation Specifications

Revised 04/22/04

These revised specifications supersede any and all others. However, any discrepancies between the approved construction plans and those of the Town MUST be brought to the attention of the Town's designated representative for a final determination. The contractor will present the Town's representative an as-built plan at the final walk-through, along with three Bucker V075 quick coupling keys with hose-end swivels.

1. All work is to be accomplished by or directly supervised at all times by an on-site irrigator licensed by the State of Texas.

2. The contractor shall verify the water pressure before the installation begins. If the static pressure is different than that of the design pressure, contact the designer and Town's representative immediately so changes can be made. Send a copy to the Parks dept. at 972-450-2834 with the current dated and timed static pressure reading. Design head to head with no single head coverage. Use appropriate size nozzles for a given landscape area so as not to spray onto or over paved surfaces or structures. Do not exceed manufacturer's recommendations.

3. The irrigation installer is responsible for resetting head and/or box height due to settling and after turf, groundcover, shrubs, trees, and mulch is added to the landscape areas. The irrigation contractor must supply a workmanship warranty for (1) year from date of acceptance.

4. Plans are diagrammatic and field adjustments are often necessary. For this reason, prior to trenching, valve locations and head layout with flags needs to be done and approved by the Town's irrigation inspector. Not doing so may result in the relocation of heads and/or valves at the irrigation contractor's expense.

5. Water Taps: Water taps will be 2" in size. All parts must conform to the Town of Addison Water Department specifications and are the responsibility of the irrigation contractor to provide. Inspection of taps by the Water Department Representative must occur. Excavation and tap permits are required. Contact the Town of Addison Water Department at (972) 450-2871.

6. Water Meters: Only Master or Hersey meters with two (2) brass flanges are acceptable. Meter lay lengths must be in accordance with the Town of Addison Water Department's specifications, housed in appropriate size (to be determined by the Town's Irrigation Inspector) concrete box with lid. New stainless steel bolts and nuts must be used in the installation along with new neoprene gaskets. The box should be level with the final grade using concrete pavers to support and prevent sinking. Backfill inside the box, 3" below meter base with at least 6" of fine (1/2") pea gravel. Connection to main must be approved and inspected by the Town's Water Department Inspector and all tap materials are to be purchased at the expense of the contractor and must comply with the Town of Addison's specifications.

7. Backflow Devices: Only Watts O07 M series inline check valve assemblies with the stainless steel ball valve handles and nuts are to be used. Irrigation contractor shall provide and install brass plugs for the test cocks. Connect to the flange using teflon taped copper nipple of sufficient length to center the DCA within its housing. The device will be housed in an appropriate size, (to be determined by the Town's Irrigation Inspector) rectangular concrete box with lid using concrete pavers for proper stability and height adjustment. The irrigation contractor shall be responsible for the DCA testing in accordance with State of Texas law, using a Licensed Backflow Assembly Tester registered with the Town of Addison Water Department.

8. Sleeves : All paving must have Town approved sleeve sizes and quantities present. It is the responsibility of the irrigation contractor to notify the Town's Irrigation Inspector of any area where sleeves should be present but are not and provide such materials at his cost. Any paving installed without sleeves will necessitate a bore and subsequent materials at the irrigation contractor's expense. All sleeves 2" and smaller will be Schedule 40 PVC with size and location noted on the plan. Larger sizes will be Class 200. All piping underneath paving, including sidewalks, must be sleeved. All sleeves are to be belled end PVC pipe. A minimum length of 12 inches of sleeve material must extend beyond the pavement.

9. Glue and Primer: Use Turftite brand glue on laterals and IPS Grey Heavy Body on main lines and a good quality purple primer on all . Avoid excessive use and wipe excess glue off of all joints and fittings with a clean rag.

10. Pipe: All main line pipe 2 inches and smaller is to be Schedule 40 belled PVC; larger sizes are to be Class 200 belled PVC with a minimum depth of 14" and a maximum depth of 16". Put not more than two (2) pipes in any one trench and separate the main line from the lateral line with at least two (2) inch of cover. Class 200 belled PVC lateral piping is to be used with a minimum depth of 12" and a maximum depth of 14".

11. Fittings: No crosses are permitted. Separate tees, 45's, elbows and other fittings by at least 12 inches. Reduction tees are preferred over use of single reducer bushings. Multiple reducer bushings will not be accepted. Only Spears and/or Lasco fittings are permitted. Allow 18 inches outside of sleeve before the first fitting. No 45 degree elbows on 1 inch and larger pipe are allowed.

## 12. Valves:

A. Master Valves: Every point of connection to the water supply system shall have a Weathermatic 11000 FCR series valve as the Master Valve, housed in a standard (large) Ametek rectangular plastic valve box with 4 to 6 inches of small (1/2") pea gravel placed underneath the valve in such a manner as to prevent soil infiltration into the box. Use concrete pavers or ricks ploed under edges of valve box for stability. Note: Valve box must not rest on pipe. Blue wire shall be used as the station wire for the Master Valve.

B. Station Valves: Only Weathermatic 11000 FCR series valves are permitted. A Ball Valve will be installed before every station or zone valve. They are to be located within a standard (large) Ametek rectangular plastic valve boxes with 4 to 6 inches of (1/2") pea gravel placed underneath the valve in such a manner as to prevent soil infiltration into the box. The pea gravel should be 2 inches from the bottom of the valve body. A minimum of 3" s of valve box must extend below bottom of valve. If necessary use valve box extensions.

C. Ball Valves: Female threaded plastic Spears or Lasco ball valves with positive T-handle cut off must be installed on every 200 feet of mainline for isolation purposes. A ball valve is also required to be installed before every station valves. Use 10" Ametek valve box with a minimum of 3" extending below bottom of valve and fill to bottom of valve with 1/2" pea gravel. Use bricks or concrete box.

D. Quick Coupler Valves: Use only Buckner V075 single lug 3/4" quick coupling valves with a metal top. They are to be connected to a threaded fitting. Teflon tape and appropriate length of gray schedule 80 nipples and schedule 40 fittings are to be used for the swing joint. Secure to 18 inch by 1/2 inch steel rebar with a stainless steel worm screw clamp. House QCV in a 10 inch round plastic Ametek valve box. Install Spears ball valve prior to each QCV. Bricks or pavers need to be installed under edges of valve boxes for stability. Backfill bottom of box with 1/2" pea gravel half way up body of valve.

E. Flowmeters: Purchase from a Rain Master supplier and install appropriately sized Data Industrial flowmeter. Follow all installation instructions as approved by Rain Master. The irrigation contractor must also purchase from Rain Master and install shielded Rain Master EV-Cab-Sen flow meter cable and install within continuous 3/4" or larger gray PVC conduit with 6 inch or larger J-boxes placed every 200 feet or where 360 degrees of fittings are installed; only sweep fittings are permitted. Only a continuous run of cable is allowed; no splices will be allowed except at the point of connection to the flow meter. Connections at the flow meter must first be soldered and then water proofed within a 3-M DBY connector. Note: certain Rain Master requirements must also be met regarding installation order and distances of separation between DCA, flow meter, master valve and the first fitting. It is the responsibility of the irrigation contractor to adhere to these requirements. At final walk through, proper operation of the flow meter at the Rain Master controller must be demonstrated by the irrigation contractor.

13. Heads: All heads will be installed using polyethylene green nipples (3/4"x6" for rotors and 1/2"x6" for pop-ups) screwed into threaded fittings unless noted otherwise. No swing joints on 4" pop-ups or rotors will be allowed.

A. Pop-ups - Only Rainbird 1800 series are permitted. Install 3/4" inch above the finished grade.

a. 4 inch pop-ups: turf, tree bubblers within turf areas (use Hunter PCN 10 bubbler nozzles on spray heads).

b. 6 inch pop-ups with no side inlet: very low ground cover (less than 6 inches at mature height).

c. 12 inch pop-ups with side inlet: Ground cover and low growing shrubs. The ground cover and shrubs should not be more than 12" at maturity. The Town Inspector reserves the right to determine if and when side inlets installed using funny pipe verses the bottom inlet will be allowed. When authorized, use Hardie Blue Line Pipe with Toro barb fittings.

d. Use 1/2" Sch 80 risers with schrub adapter and Hunter PCN 10 bubbler nozzles for all tree wells with tree grates. Risers shall be a minimum of 2" below bottom of tree grates with nozzle 2" above mulch.

B. Rotors - Only Hunter 1-20 Series are permitted, unless noted otherwise. Install 3/4" above finished grade.

14. Risers: Use Sch 80 PVC with Weathermatic LXS Series shrub head adapters with a 1/2"x6" green poly cut-off nipple screwed into the threaded fitting in the ground. The irrigation inspector reserves the right to determine placement of risers versus pop-ups.

15. Wiring: All wires will be 14 gauge UF. Station wires will be red. Common wires will be white. Master valve wire will be blue. Anytime the wiring changes direction, such as at an elbow or a tee, allow a loop of at least 12 inches alongside the fitting at that location. Only continuous wire runs are permissible. Wire should follow the main line where possible and lay along a single side not crossing over lateral lines. Wire is to be placed under mainline with 2" of dirt between wire and pipe.

16. Wire Connectors: Use only DBY connectors for all field wire splices other than at the valves themselves. Allow at least 36 inches of pigtailed wire at each splice. Use King One Step tan colored connectors for all valve splices. All valve box splices are to be housed in standard (large) Ametek rectangular plastic valve boxes. All field splices are to be in 10 inch round Ametek plastic valve boxes or standard, large rectangular Ametek plastic valve boxes at the discretion of the Town's representative.

17. Backfilling: Prior to any backfilling of trenches, an inspection by the Town's irrigation representative must take place and any necessary changes implemented; otherwise manual excavation to enable proper inspection will be necessary. Use clean and approved topsoil to backfill all pipe to a depth. All heads and boxes are to be backfilled to grade with clean topsoil. No rocks greater than 1 inch are allowed. Compact trenches to alleviate settling. Minimal depth of coverage is 12 inches.

18. Valve sequencing must be performed by the contractor and in an order approved by the Town Irrigation Inspector. At least 12 inches of extra station wiring within the bottom of the pedestal is necessary for each zone and must be of neat and orderly appearance.

19. Any deficiencies in coverage noted by the Town's irrigation inspector will be rectified at the cost of the contractor.

20. Controller: A Town irrigation representative will determine the type of controller to be used. All controllers shall have a concrete pad of 36"x36"x6". Pad will be set at 3" above final grade. Install the controller after the concrete pad is completely cured (two days). Use only appropriately sized stainless steel bolts, washers and nuts to secure the controller to the concrete pad. All wiring is to enter the pedestal via appropriately sized PVC sweep elbows extending at least 1" thru and 6" out from under the pad. Control/master valve wiring, flow meter wiring and I2O-V service wiring are to be separated with each having its own access elbow. An additional spare 3/4" sweep elbow for phone service is to be installed as well. All national and local codes must be followed during the installation.

A. A/C controller - Only Irritrol MC Plus controllers will be acceptable. Both Mini-click rain and freeze sensors will be installed and placed where they can operate properly. All non-Rain Master controllers must be permanently wired for quick attachment to a Rain Master remote control unit.

B. Battery and/or Solar Operated Controllers - Only LEIT controllers will be acceptable. Install rain or freeze sensors on these controllers with SKIT8821-4 installation kit. Install on galvanized thick wall poles and set controller panel to height above finished grade to be determined by Town's representative.

C. Rain Master: Only an approved size Rain Master Evolution DX-2 controller with a stainless steel pedestal and heavy duty transient protection is permitted. The controller must include all necessary hardware to ensure reliable communication and operation with the Town's central control located at 16801 Westgrove. Installation must include the following Rain Master hardware, purchased only from a Rain Master supplier: DX-03 sensor board, DX-PH phone communication option, Data Industrial flow meter (same size as the mainline), and shielded EV-CAB-SEN flow meter cable. It is the irrigation contractor's responsibility to entail the cost of and work in conjunction with South Western Bell Telephone to establish a dedicated phone service and install an interface within the pedestal at each controller location via direct burial cable within 1" PVC conduit. The entire installation must conform to Rain Master specifications and be approved by the Town's irrigation inspector prior to and be inspected during installation. Such specifications will include grounding and pad configurations and distances of separation from water meter to DCA to master valve to flow meter and the first fitting. A functional Mini-click freeze and rain sensor with a Hunter bypass switch must be installed in an approved location and by an approved method. For part numbers and pricing of any Rain Master equipment, contact Mark Stricker of John Deere Landscapes at 972-881-0205. For technical questions, call John DuBose of RainMaster at 214-632-2289.

21. Communication is the key. If you are unsure, CALL Ron Lee, the Operations Manager of the Addison Parks Department (972) 450-2863.

## BENCHMARKS:

BM#5  
"I" CUT ON 8' INLET ON NORTH CURB LINE OF GOODMAN AVE. ±75' EAST OF PASCHAL PLACE. ELEV. 629.98

BM#6  
"I" CUT AT 6' OF 8' INLET AT THE SOUTHWEST CORNER OF MORRIS AVE. AND WITT PLACE. ELEV. 627.29

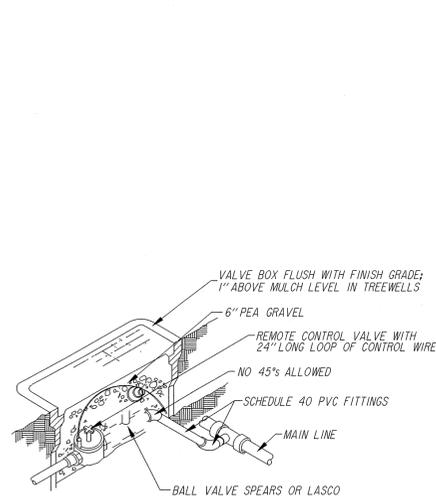
BM#7  
"I" CUT AT WEST CORNER OF ADDISON THEATRE CENTRE PARKING LOT, SECOND ENTRANCE NORTH OF ADDISON RD. ELEV. 637.66



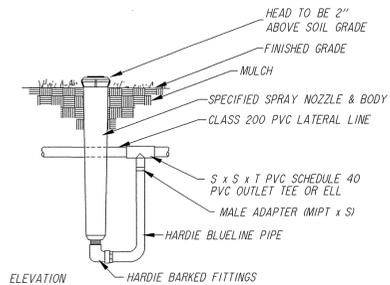
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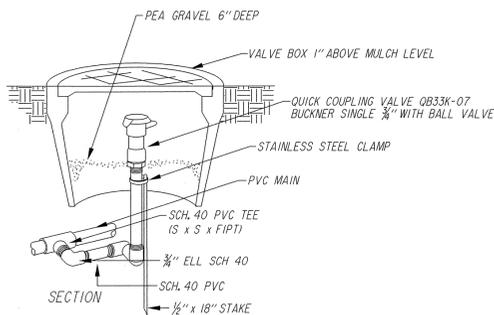
TOWN OF ADDISON IRRIGATION SPECS.						
QUORUM DRIVE						
TOWN OF ADDISON, TEXAS						
HUI11 - 201tors, Inc. 3131 McKinney Ave., Suite 600, Dallas, TX 75204 Phone (214) 871-3311/Fax (214) 871-0757						
DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZ1	HZ1		1"=20'	01/15/09		<b>C23</b>



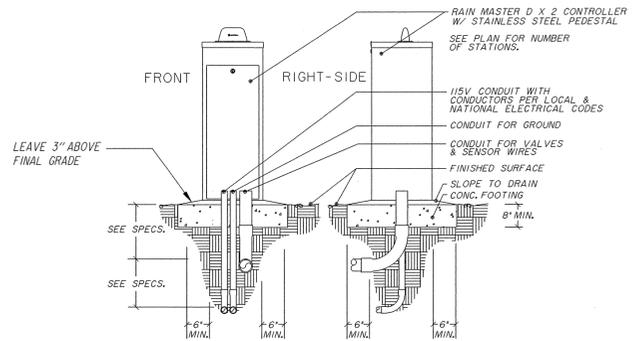
REMOTE CONTROL AND BALL VALVE not to scale



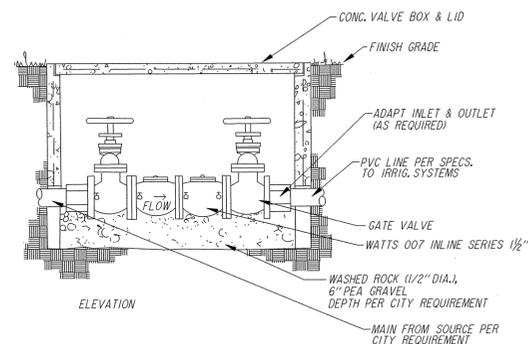
HIGH RISER ASSEMBLY not to scale



QUICK-COUPLING VALVE not to scale



PEDESTAL MOUNTED CONTROLLER not to scale



BACKFLOW PREVENTER not to scale

## IRRIGATION LEGEND

	RAINBIRD 1800 POP-UP WITHOUT SIDE INLET. 5' QUARTER NOZZLE (0.1 gpm)
	RAINBIRD 1800 POP-UP WITHOUT SIDE INLET. 5' HALF NOZZLE (0.2 gpm)
	HUNTER PCN BUBBLER NOZZLE (0.5 gpm). USE APPROPRIATE SIZED 1/2" SCH. 80 RISER SO NOZZLE WILL NOT TOUCH BOTTOM OF GRATE AND NOZZLE WILL BE 2" ABOVE MULCH.
	SCHEDULE 40 PVC MAINLINE
	CLASS 200 PVC LATERAL LINE NOTE: (ALL DIRECTLY BURIED LINE BENEATH PAVING SHALL BE SLEEVED IN SCHEDULE 40 PVC. ALL LINES UNDER PAVING SHALL BE SLEEVED; NO DIRECT BURIAL ALLOWED.)
	6" CLASS 200 PVC SLEEVE
	4" SCHEDULE 40 PVC SLEEVE
	GPM THROUGH VALVE VALVE SEQUENCING NUMBER SIZE OF VALVE
	BUCKNER V075 QUICK COUPLING VALVE
	RAIN MASTER FLOW METER
	WEATHERMATIC 11000 FCR SERIES STATION VALVE WITH LASCO OR SPEARS BALL VALVE UP STREAM OF VALVE.
	MASTER VALVE WEATHERMATIC 11000 FCR SERIES
	IRRIGATION WATER METER (MASTER OR HERSEY BRAND) WITH TWO (2) BRASS FLANGES (PROVIDE 1-1/2" IRRIGATION METER WITH 2" TAP)
	WATTS DOUBLE CHECK VALVE: 1-1/2" *007 M SERIES IN LINE QT. IN FLUSH VALVE BOX WITH 2" TAP.
	RAIN MASTER EVOLUTION DX-2 CONTROLLER
P.O.C.	POINT OF CONNECTION TO BE VERIFIED WITH RON LEE.

## IRRIGATION NOTES

- LINE LAYOUT IS DIAGRAMMATIC-ADJUST HEAD AND LINE LOCATIONS ON SITE TO ACCOMMODATE EXISTING JOB CONDITIONS, SLEEVE LOCATIONS AND TO ACHIEVE COMPLETE COVERAGE.
- ALL MAIN LINE PIPING SHALL BE BURIED TO HAVE A MINIMUM COVER OF 14". ALL LATERAL PIPING DOWNSTREAM OF THE MAIN LINE SHALL BE BURIED TO HAVE A MINIMUM COVER OF 12".
- ALL VALVE BOXES SHALL BE GREEN LID AND BLACK BODY (AMETEK) TEN(10") INCHES BY FOUTEEN(14") INCHES (RECTANGULAR) FOR REMOTE CONTROL VALVES AND TEN(10") INCHES (ROUND) FOR QUICK COUPLER VALVES.
- CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT, IF THE STATIC PRESSURE IS LESS THAN THE DESIGN STATIC PRESSURE OF 65 PSI. PRESSURE REGULATION AT THE SOURCE SHALL BE REQUIRED IF PRESSURE IS GREATER THAN 75 PSI.
- ALL WIRING FROM THE IRRIGATION CONTROLLER TO THE REMOTE CONTROL VALVES SHALL BE UF-14/1 DIRECT BURIAL CABLE. (WHITE FOR COMMON, RED FOR STATIONS AND BLUE FOR MASTER VALVE) ALL WIRE SPLICES SHALL BE MADE IN VALVE BOXES ONLY USING KING CONNECTORS AND SEALANT. PROVIDE SCHEDULE 40 SLEEVES FOR WIRE UNDER PAVED AREAS AS REQUIRED.
- CONTRACTOR SHALL NOT TRENCH IN CRITICAL ROOT ZONE AREA FOR EXISTING TREES.
- CONTRACTOR SHALL PROVIDE FOR RAINMASTER REMOTE CONTROL SYSTEM.
- CONTRACTOR SHALL PROVIDE PHONE SERVICE AND ELECTRICAL SERVICE TO THE CONTROLLER.
- NO FITTINGS WILL BE ALLOWED UNDER PAVED SURFACES WITHOUT SLEEVES.
- ALL IRRIGATION INSTALLATION SHALL CONFORM TO THE LOCAL CODES AND REGULATIONS.
- IRRIGATION SYSTEM SHALL BE INSTALLED AND FULLY OPERATIONAL BEFORE LANDSCAPING INSTALLATION.
- IRRIGATION HEADS SHALL BE PLACED AND ADJUSTED SO AS NOT TO SPRAY ON ANY STRUCTURE, SIDEWALK OR STREET.
- IRRIGATION HEADS SHALL BE PLACED AND SIZED SO AS NOT TO BE SUSCEPTIBLE TO DAMAGE BY AUTOMOBILE OVERHANGES.
- IRRIGATION CONTRACTOR SHALL PLACE ADJUSTABLE ARC NOZZLES IN PLACE OF FIXED ARC NOZZLE AS NEEDED TO ELIMINATE OVERSPRAY ON TO PAVEMENT.
- TOWN OF ADDISON'S SPECIFICATIONS SUPERSEDE ALL OTHER SPECIFICATIONS.

### BENCHMARKS:

BM#5  
"C" CUT ON 8' INLET ON NORTH CURB LINE OF GOODMAN AVE. 175' EAST OF PASCHAL PLACE. ELEV. 629.98

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"C" CUT AT C OF 8' INLET AT THE SOUTHWEST CORNER OF MORRIS AVE. AND WITT PLACE. ELEV. 627.29

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IRRIGATION DETAILS						
QUORUM DRIVE						
TOWN OF ADDISON, TEXAS						
HUNT - 2010rs, Inc. 3131 McKinney Ave., Suite 600, Dallas, TX 75204 Phone (214) 871-3311/Fax (214) 871-0757						
DESIGN	CHECKED	APPR.	SCALE	DATE	PROJECT NO.	NO.
HZ1	HZ1		1"=20'	01/15/09		C24