



Project:

City of Rockwall

The Harbor  
Phase I  
Public Improvements

Rockwall, Texas

Project Number:  
D03991



Designed: gpsi

Drawn: gdr

Reviewed:

Date Issued:  
13 JULY 2005

Revisions:

City of Rockwall Engineering Dept.

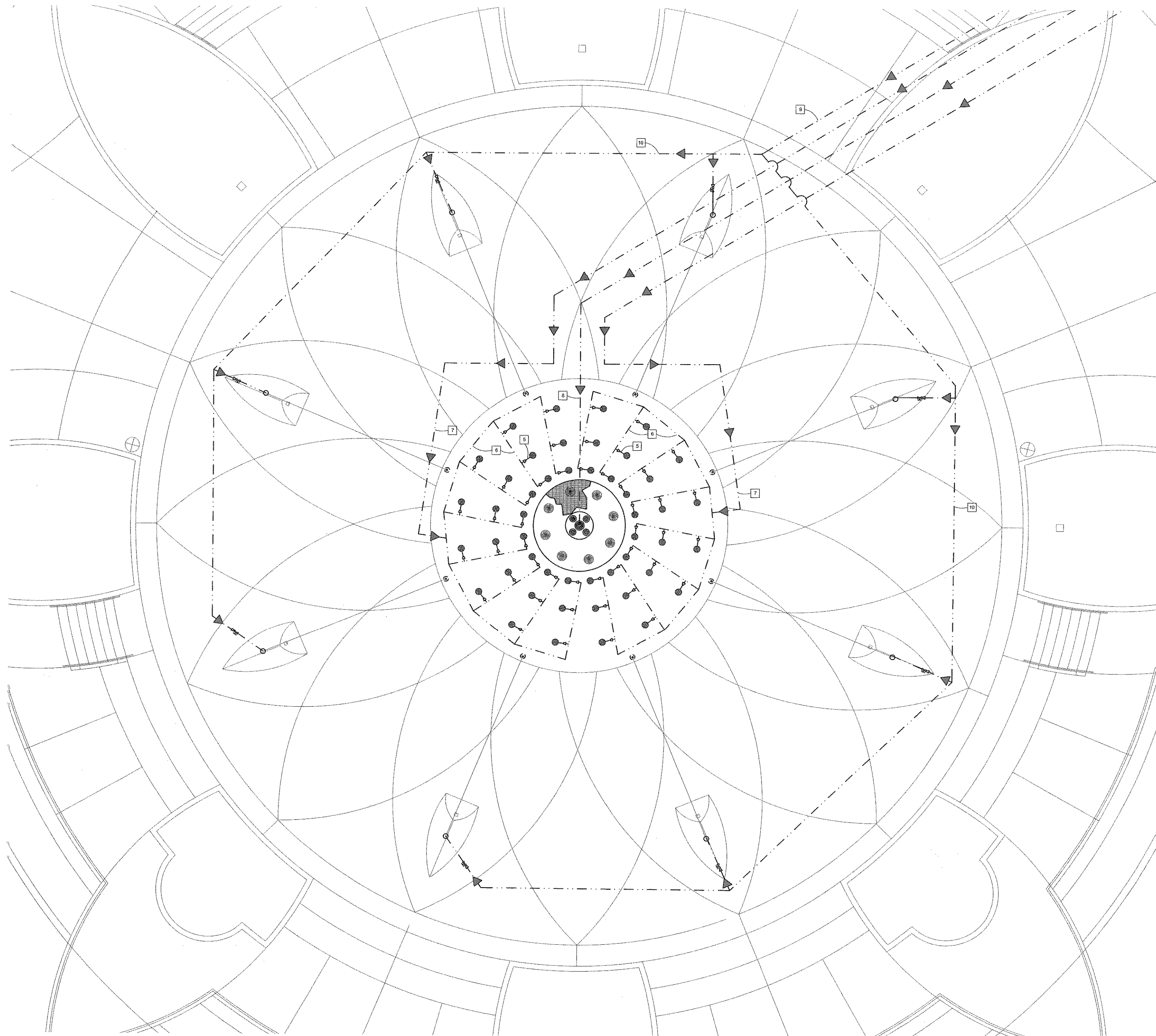
City Engineer:

Sheet Title:

Plaza Feature -  
Discharge Piping  
Enlarged Plan

Sheet Number:

LW. 09



**WATER FEATURE DISCHARGE PIPING LEGEND**

SYM	SIZE	DESCRIPTION	#REQD
5	1"	SCH. 80 PVC WATERSWITCH SUPPLY AT FIXTURE	48
6	4"	SCH. 80 PVC SUPPLY MANIFOLD PIPING TO WATERSWITCH SUPPLY	2
7	6"	SCH. 80 PVC MAIN SUPPLY TO 4" MANIFOLDS	2
8	3"	SCH. 80 PVC MAIN RETURN TO CENTER NOZZLE ASSEMBLY	1
9	8"	SCH. 80 PVC MAIN SUPPLY TO STATUE FEEDS	1
10	6"	SCH. 80 PVC LOOP SUPPLY TO STATUE FEEDS	2
11	2"	SCH. 80 PVC STATUE NOZZLE FEEDS	8

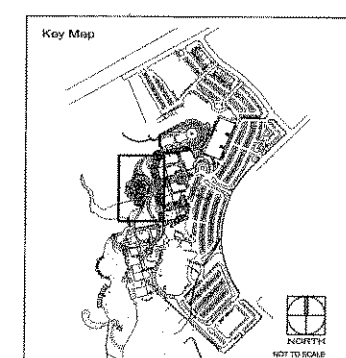
NOTE: REDUCE ALL PIPE SIZES AS NEAR TO DEVISE OR PENETRATIONS AS POSSIBLE.

PIPM SYSTEM, POOL, FITTING, PIPING, AND ELECTRICAL RUNS ARE SHOWN FOR CLARITY ONLY. ACTUAL ROUTING MAY DIFFER IN THE FIELD.  
IT SHALL BE THE FOUNTAIN SUB CONTRACTOR'S RESPONSIBILITY TO COORDINATE PLACEMENT OF ALL PIPING AND CONDUITS TO AVOID CONFLICTS WITH THE DRAINAGE SYSTEM SHOWN ON THE "DR" SERIES DRAWINGS.

ELECTRICAL CONDUIT -  
HYDRAULIC PIPING LINES -  
UNDERWATER CABLE -

**APPROVED FOR CONSTRUCTION**

DEC 15 2005



PLAZA FEATURE ENLARGED DISCHARGE PIPING PLAN

PLAN

SCALE: 3/16" = 1'-0"

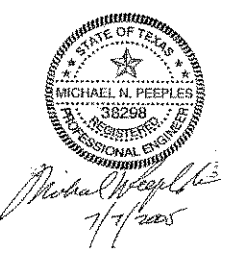


Landscape Architects - Planners  
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Plaza Feature -  
Riser Plan

Sheet Number:  
LW. 11

THE ENGINEERING INFORMATION ON THIS PAGE IS BASED ON THE FOLLOWING ASSUMPTIONS/STANDARDS:  
(1) WATER DISCHARGE FROM THE NOZZLES SHALL BE AT 20 FPS MAX FOR INTERACTIVE PLAY  
(2) PUMPS SHALL OPERATE WITH FLOODED SUCTION  
(3) EQUIPMENT ROOM IS WITHIN 200 FT. OF FEATURE  
(4) SUCTION PIPE VELOCITY SHALL BE LESS THAN 6 FPS  
(5) DISCHARGE PIPE VELOCITY SHALL BE LESS THAN 8 FPS  
(6) PUMP SUCTION MUST BE PROTECTED BY AN INLET STRAINER. PERFORMANCE SIZE SHALL NOT EXCEED 1/8" DIAMETER  
(7) GRAVITY DRAINS TO SLOPE MINIMUM 1/4" PER FOOT - MAXIMUM VELOCITY 3 FPS  
(8) THE MAXIMUM FILTRATION TURNOVER FOR THE WATER VOLUME CONTAINED WITHIN AN INTERACTIVE WATER FEATURE SHALL NOT EXCEED 30 MINUTES  
(9) THE MAXIMUM FILTRATION TURNOVER FOR THE VOLUME OF WATER IN A NON INTERACTIVE WATER FEATURE SHALL NOT EXCEED NOT 4 HOURS  
(10) WATER FEATURES SHALL COME EQUIPPED WITH AN AUTOMATIC CHEMICAL DOSING SYSTEM WITH A MINIMUM OF 2 SENSORS, ORP AND PH.  
(11) CALCULATIONS, PIPE SIZES, FITTINGS AND ALL OTHER SIZING AND CALCULATED FIGURES ARE BASED UPON THE USE OF STANDARD NORTH AMERICAN SCHEDULE 80 PVC PIPE AND FITTINGS.  
(12) CONDUIT SIZES BASED ON NEC CHART FOR THHN WIRE AND EMT CONDUIT  
(13) LOW VOLTAGE LIGHTING CALCULATIONS ARE BASED ON MAXIMUM 12.5, MIN 11.5 VOLTS AT THE LAMP USING MAXIMUM 13.5 VOLT TAP ON THE TRANSFORMER

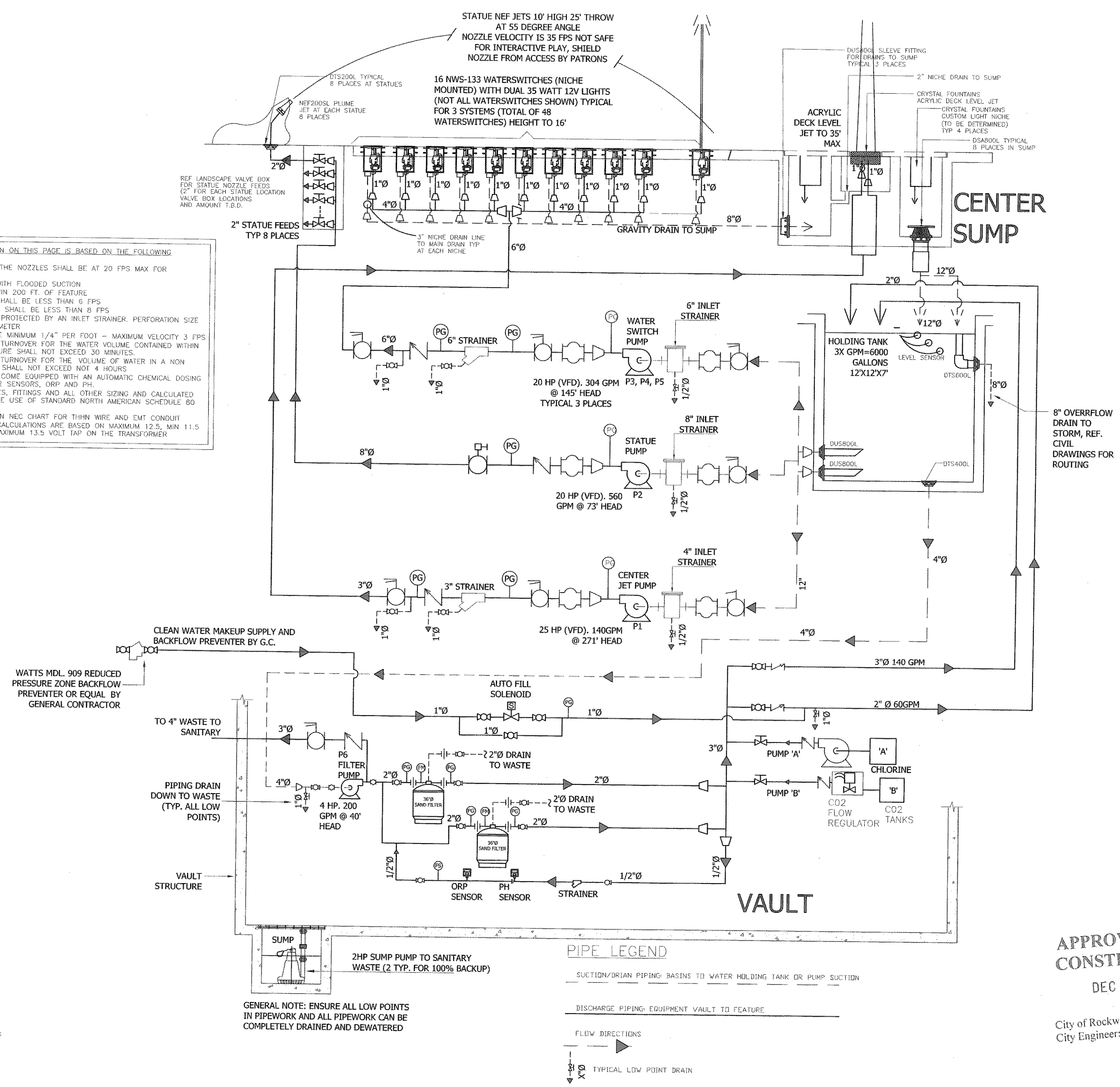
**PFD LEGEND**

	LEVER OPERATED BUTTERFLY VALVE
	GEAR OPERATED BUTTERFLY VALVE
	CHECK VALVE
	GATE VALVE
	UNION
	BALL VALVE
	FLEXIBLE COUPLING
	REDUCER
	PRESSURE GAUGE
	PRESSURE SWITCH
	TEMPERATURE SWITCH
	SOLENOIL CONTROLLED GLOBE VALVE
	FLOW METER
	FLOW SWITCH
	GLOBE VALVE

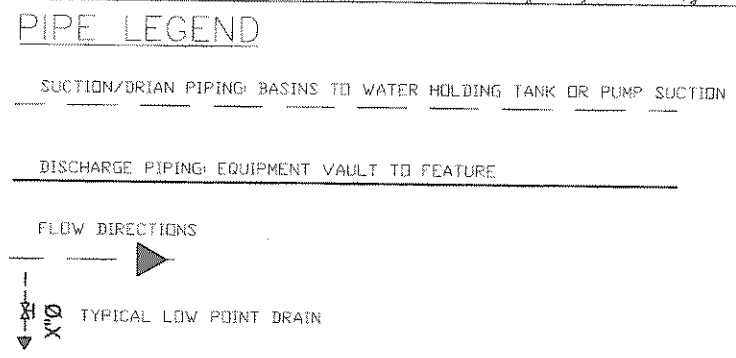
**PUMP LEGEND**

NO.	DESCRIPTION	QTY.
P1	MFG. SCOT PUMP, MDL. 62 25 HP, 230/480V 3 PH. 3500 RPM, TEFC, 140 GPM AT 271 TSD.	1
P2	MFG. SCOT PUMP, MDL. 57 20 HP, 230/480V 3 PH. 3500 RPM, TEFC, 560 GPM AT 73 TSD.	1
P3	MFG. SCOT PUMP, MDL. 55F 20 HP, 230/480V 3 PH. 3500 RPM, TEFC, 304 GPM AT 145 TSD.	1
P4	MFG. SCOT PUMP, MDL. 55F 20 HP, 230/480V 3 PH. 3500 RPM, TEFC, 304 GPM AT 145 TSD.	1
P5	MFG. SCOT PUMP, MDL. 55F 20 HP, 230/480V 3 PH. 3500 RPM, TEFC, 304 GPM AT 145 TSD.	1
P6	MFG. SCOT PUMP, MDL. 56F 5 HP, 230/480V 3 PH. 1750 RPM, TEFC, 300 GPM AT 40 TSD.	1
P7	MFG. GOLD MDL. 988803 SUBMERSIBLE PUMP, 2 HP, 480V 3 PH, MDL. SERIES 8 V3803403	2

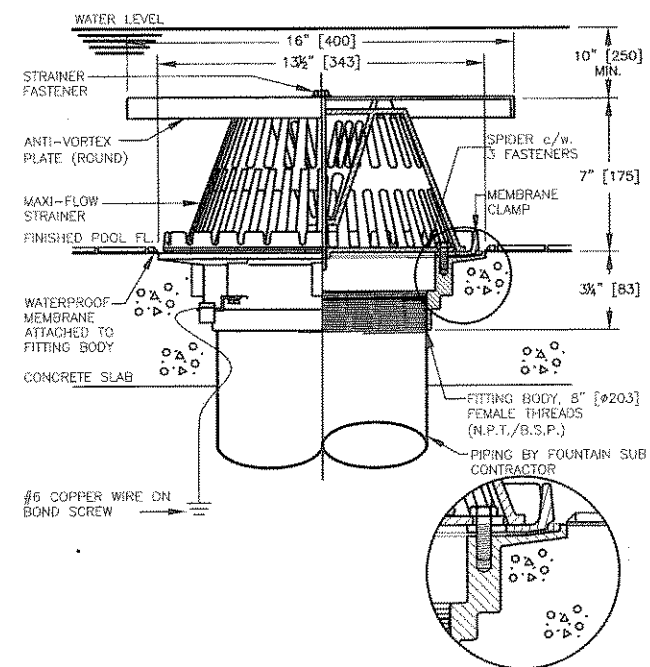
IT SHALL BE THE FOUNTAIN SUB CONTRACTOR'S RESPONSIBILITY TO COORDINATE PLACEMENT OF ALL PIPING AND CONDUITS TO AVOID CONFLICTS WITH THE DRAINAGE SYSTEM SHOWN ON THE 30 SERIES DRAWINGS.



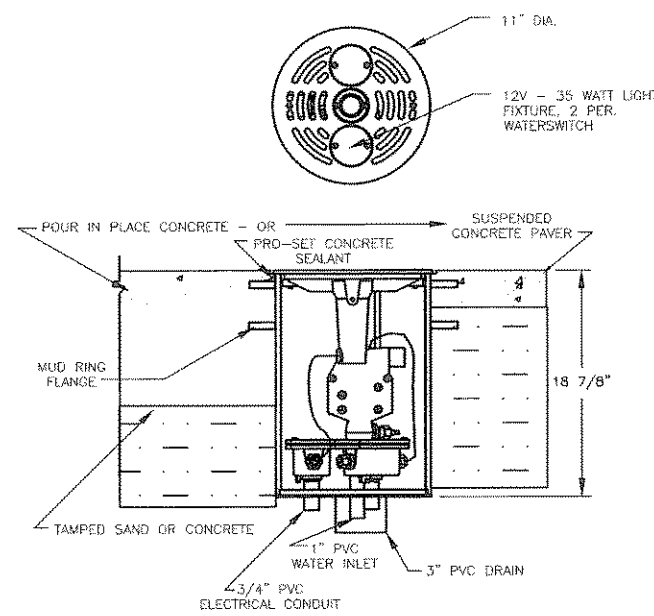
**PLAZA FEATURE PIPING RISER DIAGRAM**  
RISER



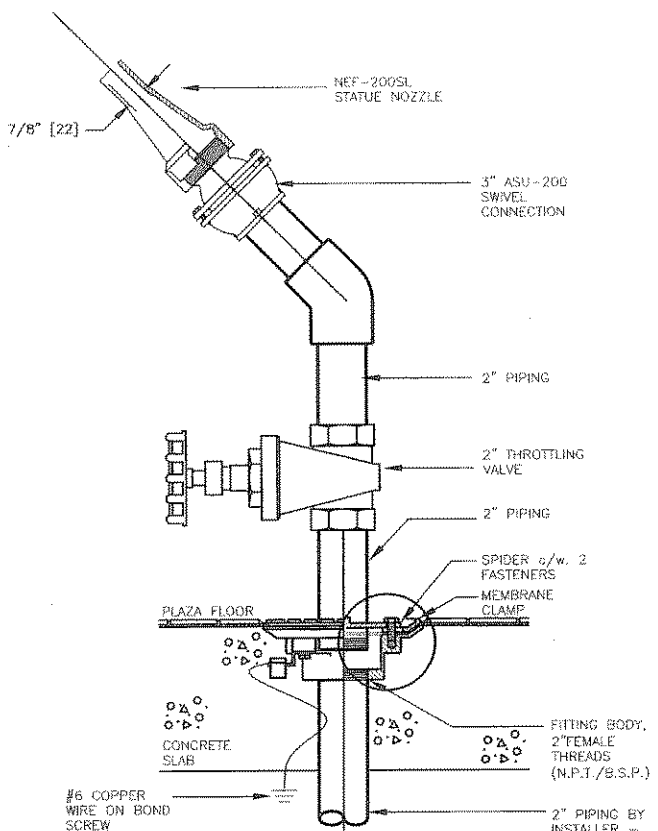
SCALE: NONE



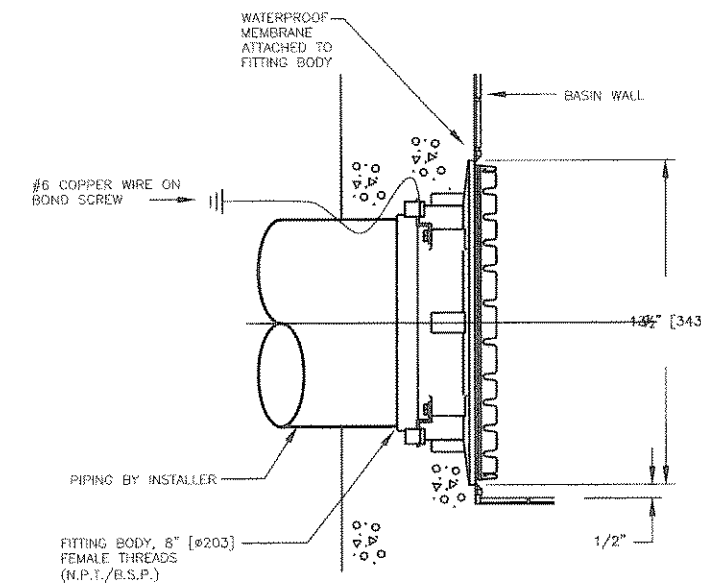
**A** DSA-800L MAIN BASIN DRAIN FITTING  
DETAIL SCALE: N.T.S.



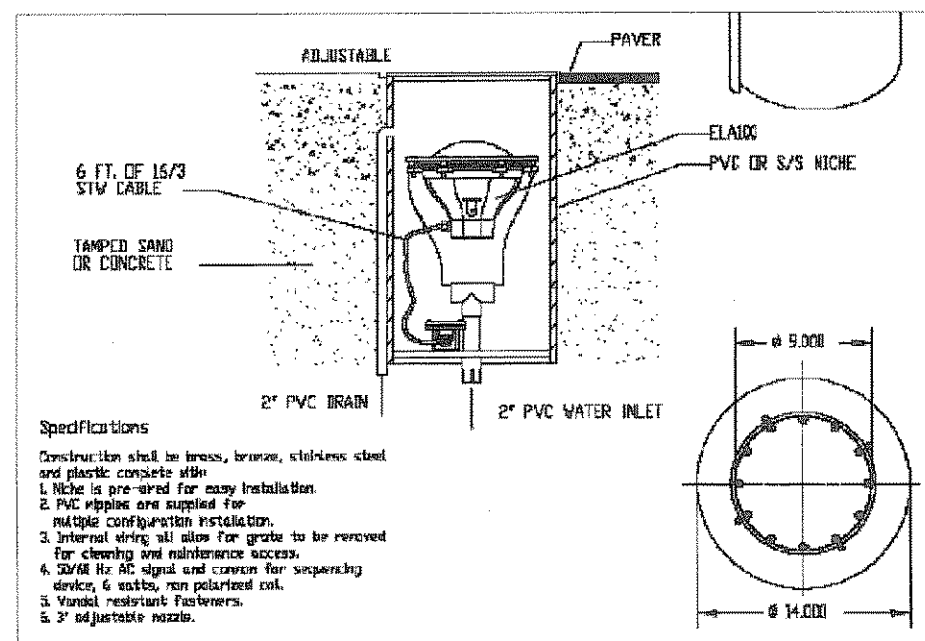
**B** NWS-133 PLAZA DECK NOZZLE/LIGHT  
DETAIL SCALE: N.T.S.



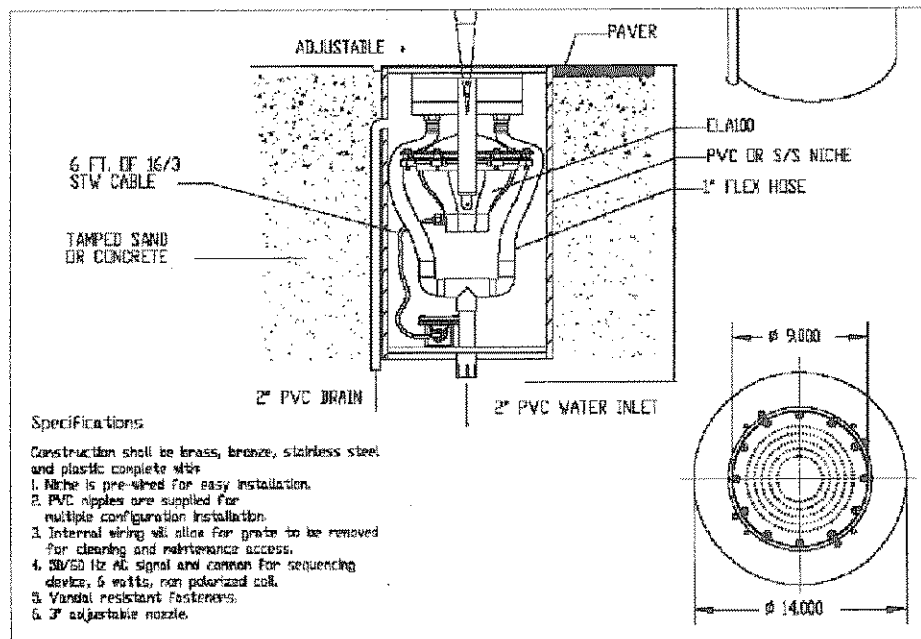
**C** NEF-200SL STATUE NOZZLE ASSEMBLY  
DETAIL SCALE: N.T.S.



**D** DUS-800 DRAIN PIPE TO TROUGH SLEEVE  
DETAIL SCALE: N.T.S.



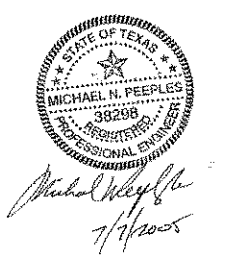
**E** CUSTOM DECK MOUNT 300 WATT LIGHT  
DETAIL SCALE: N.T.S.



**F** CUSTOM DECK MOUNT CENTER NOZZLE/LIGHT ASSEMBLY  
DETAIL SCALE: N.T.S.

NOTE: FOUNTAIN SUB CONTRACTOR TO COORDINATE INSTALLATION OF STATUE NOZZLES WITH ARCHITECT AND STATUE ARTIST

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DEC 15 2005  
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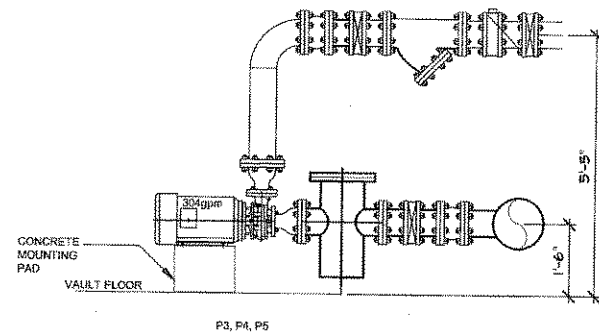
Revisions:

Sheet Title:  
Plaza Feature -  
Component Details

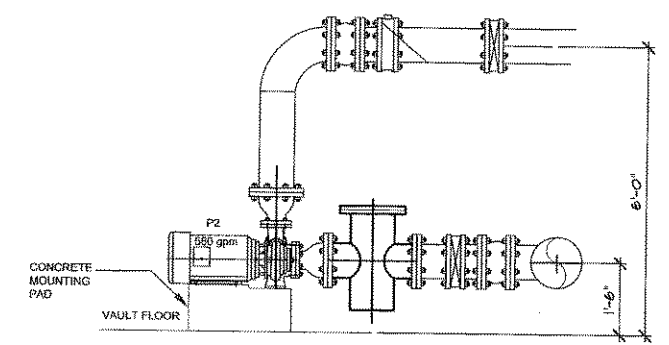
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LW. 11B

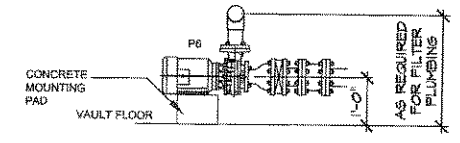




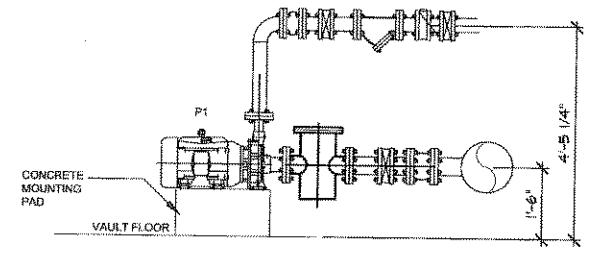
**F** PLAZA FEATURE P3,P4,P5 - PUMP ELEVATIONS  
ELEVATION SCALE: 1/2" = 1'-0"



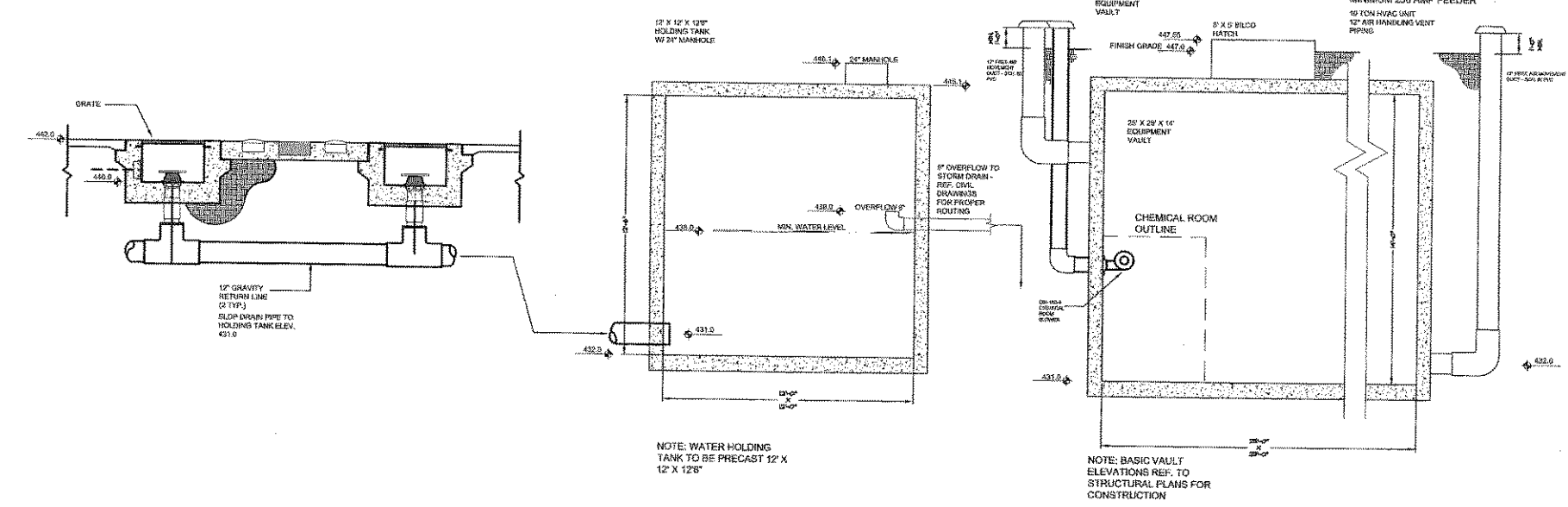
**E** PLAZA FEATURE P2 - PUMP ELEVATIONS  
ELEVATION SCALE: 1/2" = 1'-0"



**G** PLAZA FEATURE P6 - PUMP ELEVATIONS  
ELEVATION SCALE: 1/2" = 1'-0"

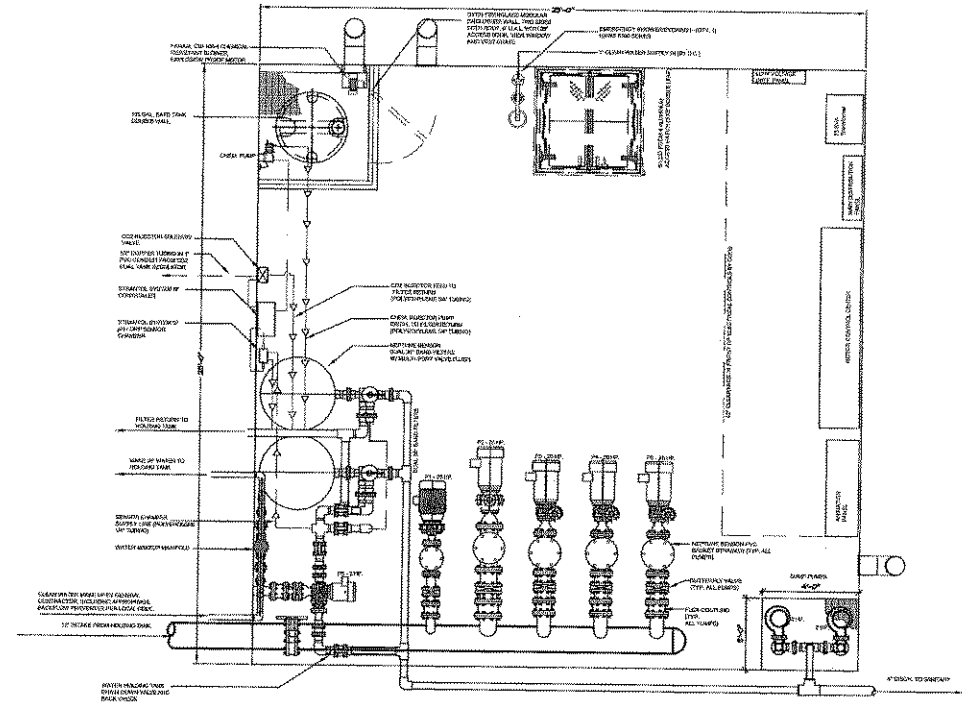


**D** PLAZA FEATURE P1 - PUMP ELEVATIONS  
ELEVATION SCALE: 1/2" = 1'-0"

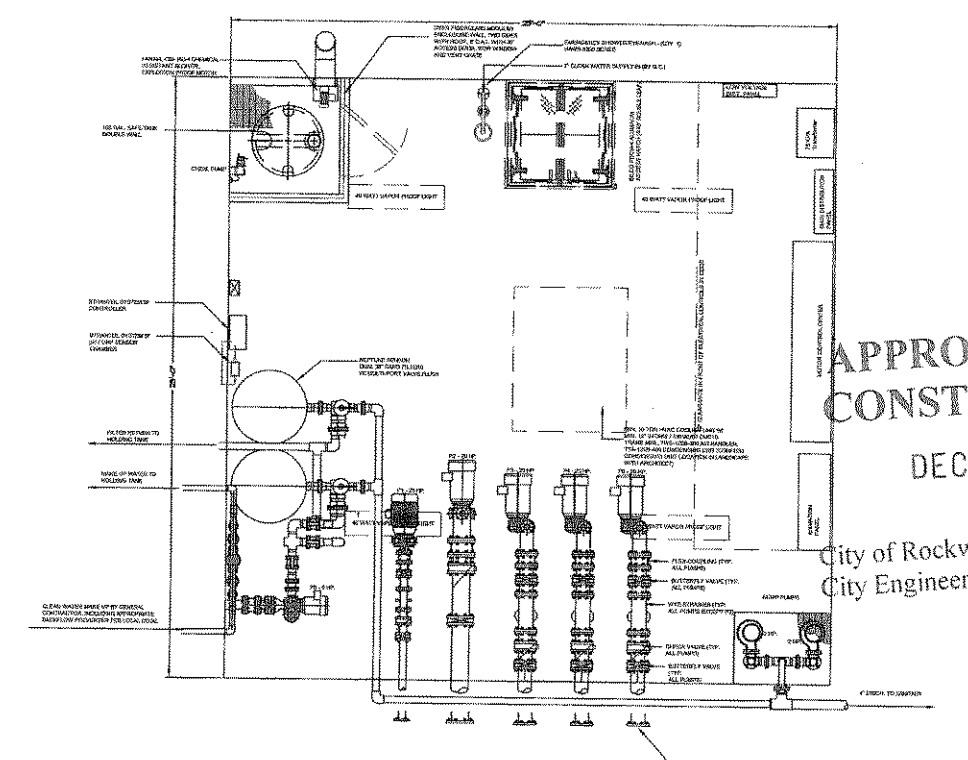


**C** PLAZA FEATURE VAULT ELEVATION PLAN  
SECTION SCALE: 1/4" = 1'-0"

- NOTES:
- 1) ALL PIPING IN VAULT TO BE SCH. 40 STEEL WITH INDUSTRIAL LIGHT GRAY, INDUSTRIAL ENAMEL PRIMER AND EXTERIOR COATING UNLESS OTHERWISE STATED. PIPING TO PROTRUDE THROUGH VAULT WALL WITH 150 LB. ANSI FLANGE CONNECTIONS.
  - 2) EXCEPTION: ALL FILTER PLUMBING TO BE SCH. 80 PVC.
  - 3) ALL PLUMBING BETWEEN VAULT AND FOUNTAIN BASINS TO BE SCH. 80 PVC, CLEANED, PRIMED, GLUED, AND TESTED IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICES.
  - 4) WATER FEATURE SUB CONTRACTOR TO PROVIDE A MINIMUM OF TWO GFCI DUPLEX RECEPTACLES FOR CONVENIENCE OUTLETS.
  - 5) EQUIPMENT VAULT TO INCLUDE AN OSHA APPROVED ACCESS LADDER OR STEPS WITH SAFETY UP POST.
  - 6) WATER FEATURE SUB CONTRACTOR TO PROVIDE INSTALLATION DETAILS OF EQUIPMENT PRIOR TO CONSTRUCTION INCLUDING ELEVATIONS DETAILS OF EQUIPMENT VAULTS SHOWING PENETRATIONS CENTERLINES.
  - 7) WATER FEATURE SUB CONTRACTOR IS RESPONSIBLE FOR ELECTRICAL WIRING OF ALL DEVICES IN VAULT ACCORDING TO LOCAL CODES.
  - 8) WATER FEATURE SUB CONTRACTOR TO PROVIDE A MINIMUM OF A 1/2" BALL VALVE ON ALL PIPING, FILTERS, AND STRAINERS FOR DRAINING - REF. PIPING LINE DIAGRAMS.
  - 9) WATER FEATURE SUB CONTRACTOR TO PROVIDE DUAL TANK CO2 REGULATOR, REGAL DUAL CYLINDER SCALE DISTRIBUTED BY RECREONICS, INC. 800-428-3254 OR EQUAL. CO2 TANKS TO BE LOCATED ABOVE GROUND AS DIRECTED BY THE LANDSCAPE ARCHITECT FOR ACCESS AND EXCHANGE.
- COMPONENT LEGEND
- REDUCER
  - SPACER SPOOL
  - SPHERE FLEX COUPLING
  - BUTTERFLY VALVE
  - CHECK VALVE
  - INTAKE BASKET STRAINER
  - IRAC THERMOSTAT
  - CONVENIENCE OUTLET
  - PHONE LINE IN FOR FUTURE USE



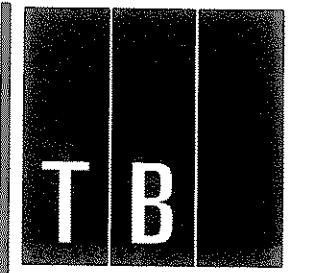
**B** PLAZA FEATURE VAULT SUCTION PIPING PLAN  
SECTION SCALE: 1/4" = 1'-0"



**A** PLAZA FEATURE VAULT DISCHARGE PIPING PLAN  
SECTION SCALE: 1/4" = 1'-0"

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City of Rockwall Engineering Dept.  
City Engineer:



T B PARTNERS

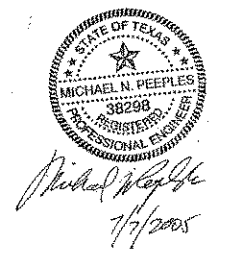
Landscape Architects • Planners  
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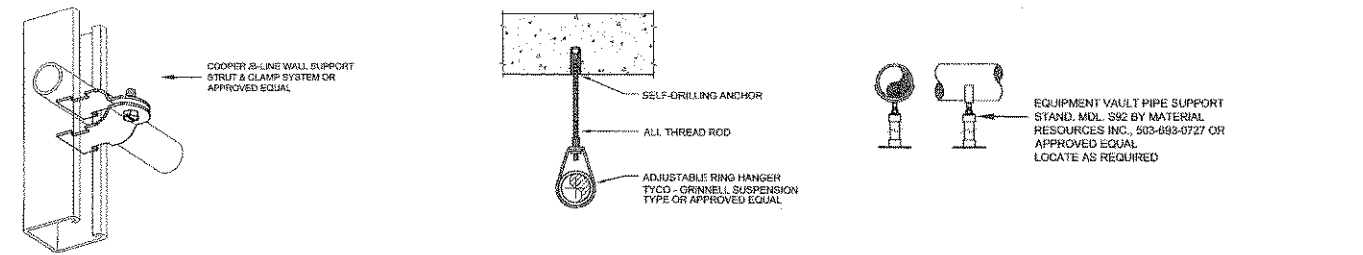
Revisions:

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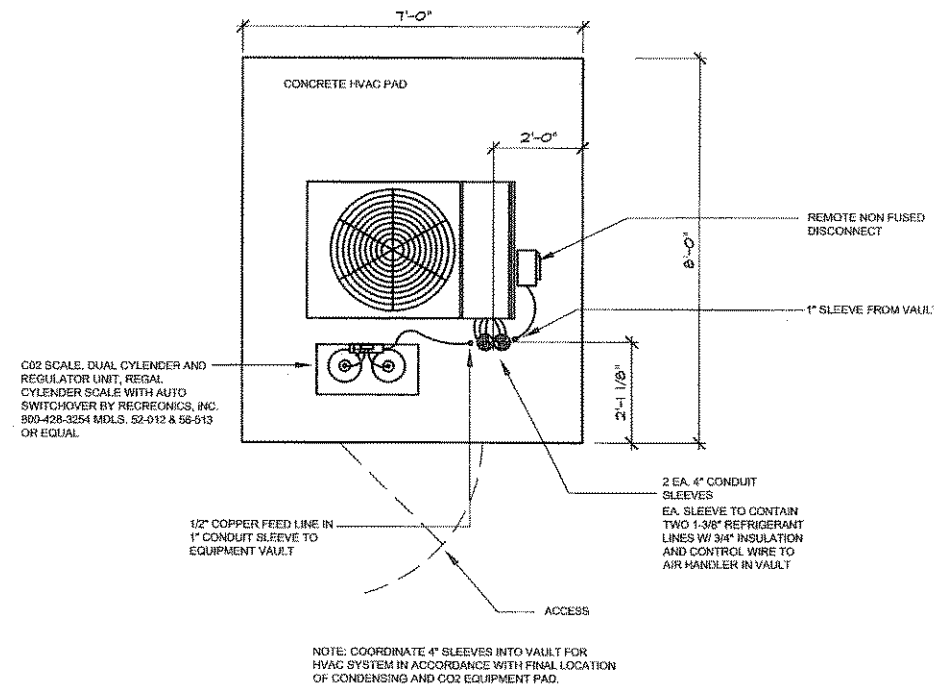
Plaza Feature -  
Equipment Vault  
Plan

Sheet Number:

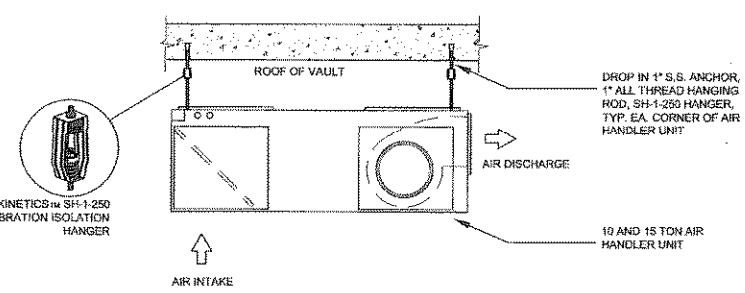
LW. 12



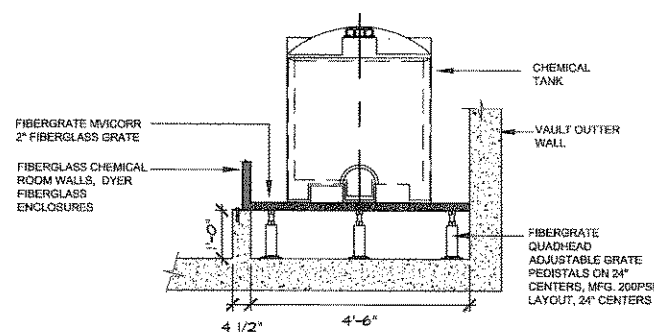
**G** PIPE SUPPORTS  
DETAIL SCALE: N.T.S.



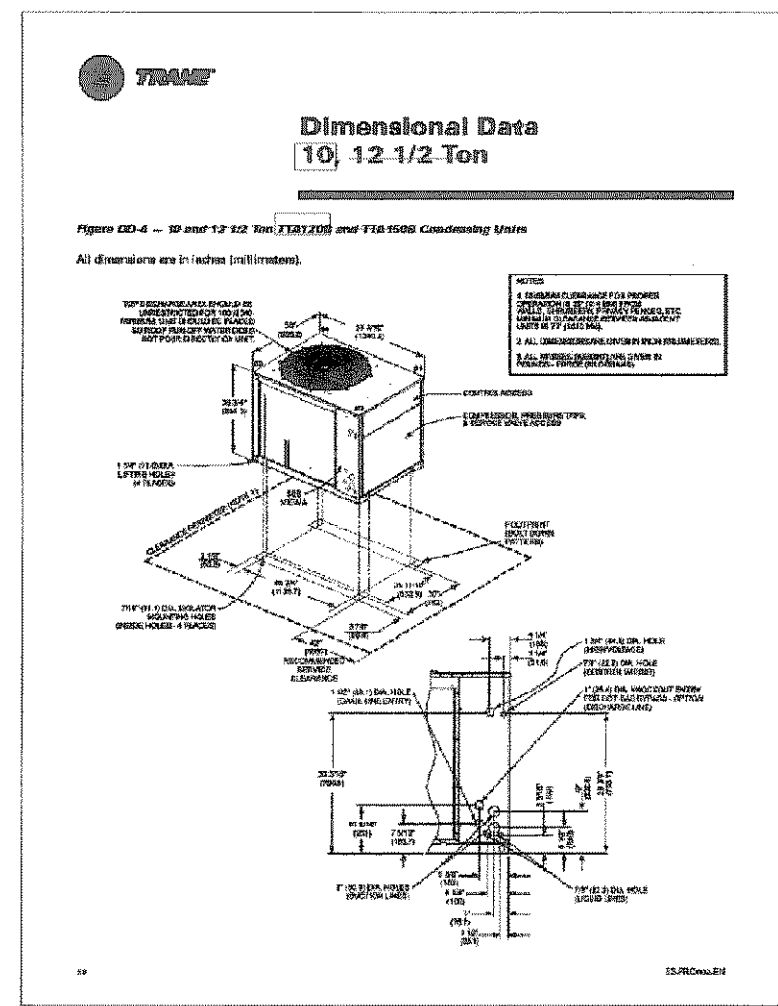
**F** HVAC / CO2 MOUNTING PAD  
PLAN SCALE: N.T.S.



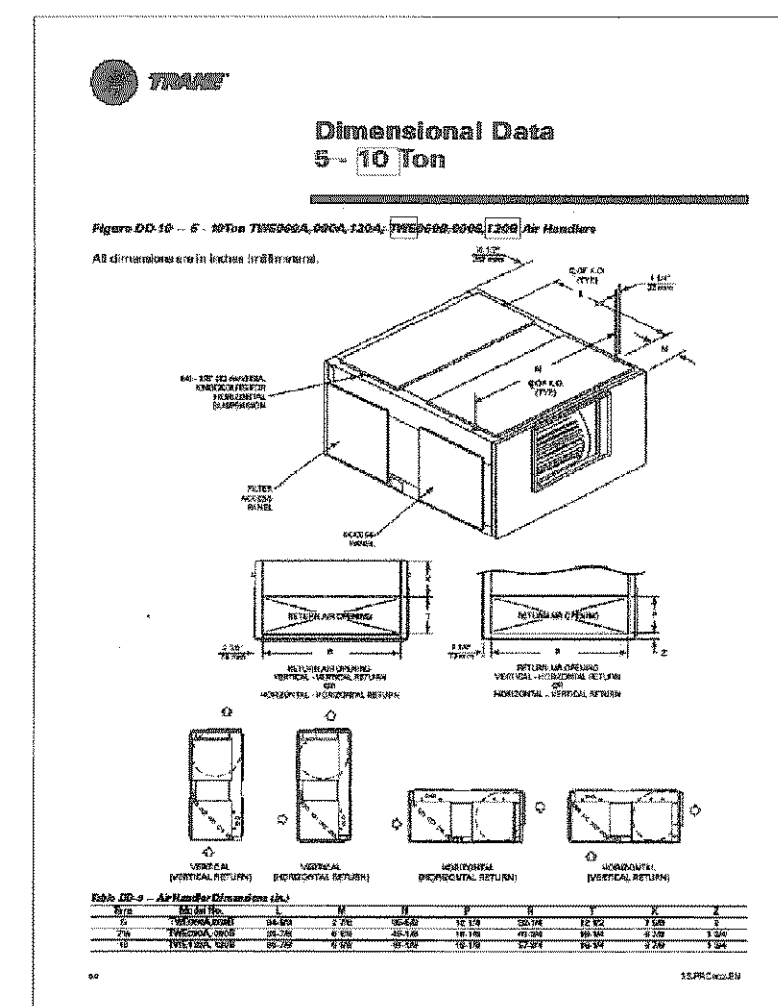
**E** TYPICAL VAULT AIR HANDLING UNIT MOUNTING  
ELEVATION SCALE: N.T.S.



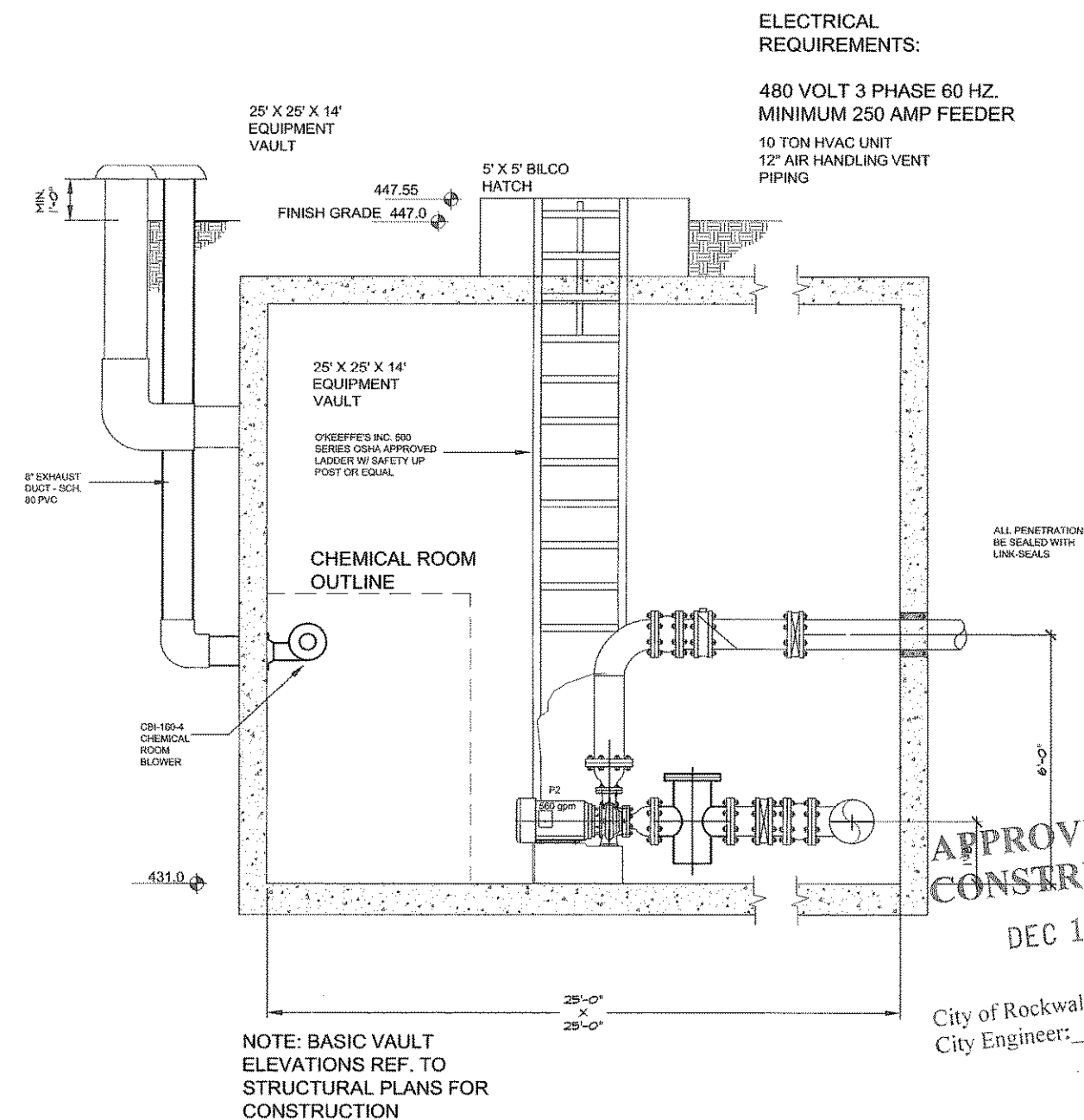
**D** TYPICAL CHLORINE TANK CATCH BASIN DETAIL  
ELEVATION SCALE: 1/2" = 1'-0"



**C** PLAZA VAULT TTA-120B CONDENSING UNIT  
DETAIL SCALE: NONE



**B** PLAZA VAULT TWE-120 AIR HANDLER  
DETAIL SCALE: NONE

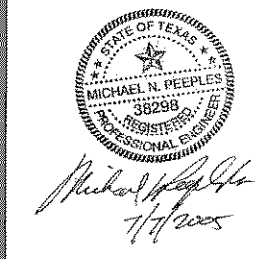


**A** PLAZA VAULT TYPICAL PUMP INSTALLATION  
ELEVATION SCALE: 1/2" = 1'-0"

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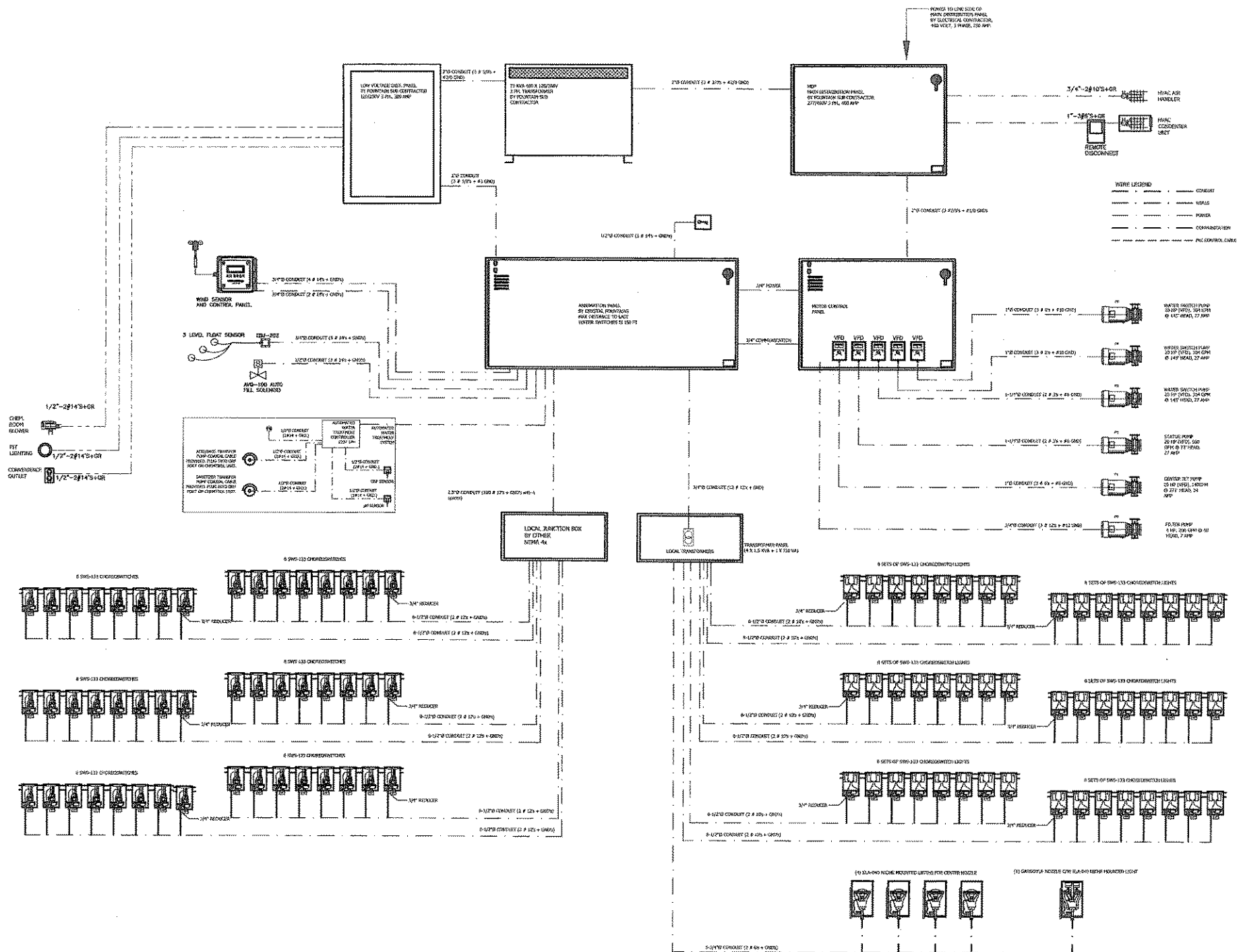
City of Rockwall Engineering Dept.  
City Engineer:

Sheet Title:

Plaza Feature -  
Equipment Vault  
ELECTRICAL

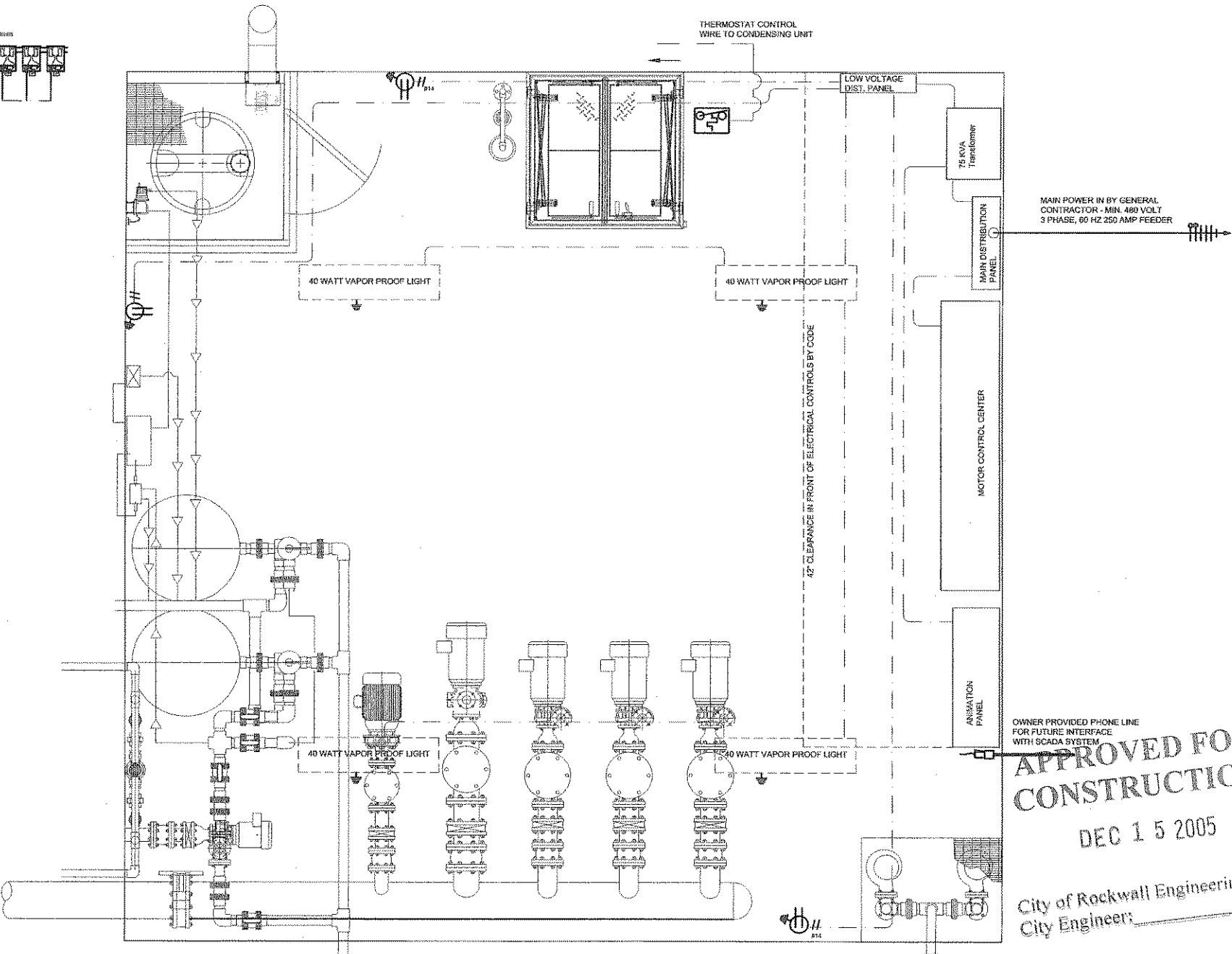
Sheet Number:

LW. 12C



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**B** PLAZA FEATURE OVERALL ELECTRICAL  
SCHEMATIC SCALE: NONE



**A** PLAZA FEATURE VAULT ELECTRICAL  
PLAN SCALE: 1/2" = 1'-0"

