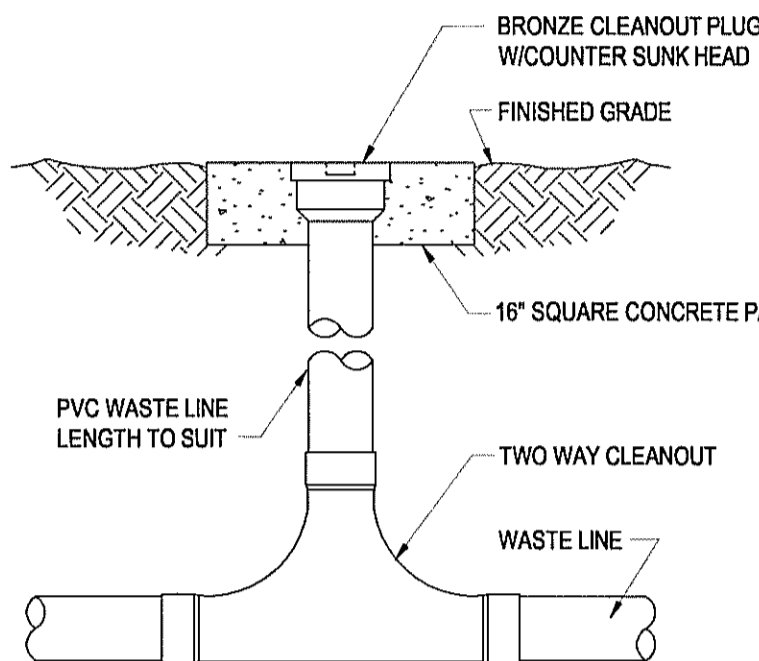
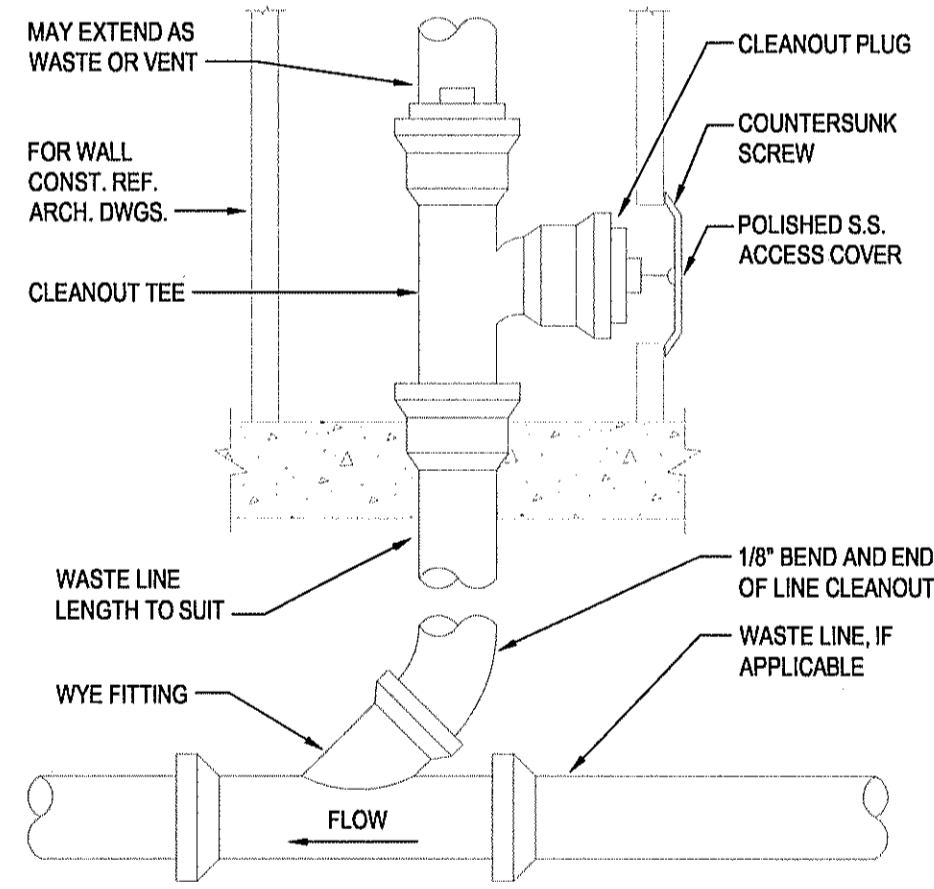


**1 Floor Cleanout Detail**  
Scale: None



**2 Exterior Cleanout Detail (ECO)**  
Scale: None



**3 Wall Cleanout Detail**  
Scale: None

**PLUMBING GENERAL NOTES**

- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND GOVERNING AUTHORITIES. I.E.: FLORIDA BUILDING CODE 2007- PLUMBING WITH 2008 SUPPLEMENT.
- ALL SANITARY PIPING 2-1/2" OR LESS SHALL HAVE A 1/4" PER FOOT SLOPE. ALL SANITARY PIPING 3" OR LARGER SHALL HAVE A 1/8" PER FOOT SLOPE UNLESS OTHERWISE NOTED. ALL STORM WATER PIPING 2-1/2" OR LESS SHALL HAVE A 1/4" PER FOOT MINIMUM HORIZONTAL SLOPE. ALL STORM WATER PIPING 3" OR LARGER SHALL HAVE A 1/8" PER FOOT MINIMUM HORIZONTAL SLOPE UNLESS OTHERWISE INDICATED.
- VALVES AND FITTINGS SHALL BE OF SAME SIZE OF LINE ON WHICH THEY ARE LOCATED, UNLESS OTHERWISE INDICATED ON DRAWINGS.
- INSTALL WATER HAMMER SHOCK ARRESTORS AT EACH FIXTURE OR BATTERY OF FIXTURES WHERE REQUIRED. ARRESTORS SHALL BE FACTORY FABRICATED. INSTALL ARRESTORS AND SIZE PER PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH-201. ACCEPTABLE MANUFACTURERS: JOSAM, WATTS AND SIOUX CHIEF. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO WATER ARRESTORS AS SPECIFIED.
- CONTRACTOR IS RESPONSIBLE FOR MAINTAINING FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL PIPING AND PENETRATIONS.
- ALL WATER SUPPLY AND SANITARY LINES SHALL RUN AS CLOSE TO PLANS AS POSSIBLE WITH NO CHANGES IN SIZING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR FIXTURES.
- CHANGES IN THE DIRECTION OF SANITARY AND STORM DRAINAGE PIPING SHALL NOT BE MADE WITH FITTINGS WHICH WILL CAUSE EXCESSIVE REDUCTION IN THE VELOCITY OF FLOW OR CREATE ANY OTHER ADVERSE EFFECT. I.E.: USE OF SANITARY TEE IN A HORIZONTAL CONNECTION, USE OF A DOUBLE SANITARY TEE IN A VERTICAL STACK, USE OF SHORT RADIUS FITTINGS FOR BRANCH TO HOUSE DRAIN OR STACK CONNECTION.
- CONTRACTOR SHALL GIVE 24 HOURS NOTICE TO APPLICABLE UTILITY COMPANY PRIOR TO PERFORMING WORK INVOLVING UTILITIES.
- ALL DRAINAGE PIPING SHALL BE MARKED WITH THE SEAL OF APPROVAL OF THE NATIONAL SANITATION FOUNDATION.
- WHERE SANITARY SEWER LINES CROSS UNDERGROUND WATER SUPPLY LINES THE INSTALLATION SHALL COMPLY WITH THE FLORIDA BUILDING CODE 2007 PLUMBING, ARTICLE 603.2. CONSTRUCTED OF DUCTILE IRON PIPE (1" EACH SIDE OF WATER MAIN) OR THE WATER LINES SHOULD BE MODIFIED TO PROVIDE 8" MINIMUM CLEARANCE.
- ALL FLOOR DRAINS SHALL BE PROVIDED WITH A TRAP PRIMER VALVE AND FITTINGS UNLESS NOTED OTHERWISE.
- THE PLUMBING CONTRACTOR MAY BE REQUIRED TO DROP PIPE OUTSIDE OF BUILDING TO REQUIRED DEPTH TO PROVIDE CONNECTION TO AREA DEVELOPMENT UTILITY STUB. ALL DROPS IN DEPTH SHALL BE MADE WITH THE USE OF 45° FITTINGS.
- ROUTE ALL PIPING CONCEALED ABOVE CEILINGS, WITHIN WALLS, OR IN CHASES. EXPOSED PIPING SHALL BE SLOPED AND PAINTED TO MATCH ARCHITECTURAL FINISHES. PIPING IN MECHANICAL ROOMS MAY BE EXPOSED.
- SLEEVE AND FIRE STOP ALL PENETRATIONS (IF ANY) OF RATED WALLS, FLOORS, CEILINGS, ETC., IN ACCORDANCE WITH APPLICABLE UL STANDARDS AND LOCAL CODES TO MAINTAIN RATINGS. REFER TO SPECIFICATIONS AND ARCHITECTURAL DRAWINGS FOR RATED WALLS, CEILINGS AND FLOOR INFORMATION.
- ALL WATER PIPING INSTALLED IN EXTERIOR WALLS SHALL BE PLACED ON THE INTERIOR SIDE OF THE WALL. THE WALL INSULATION SHALL BE PLACED ON THE EXTERIOR SIDE OF THE PIPE.
- SEE RISER DIAGRAMS FOR BRANCH PIPING DETAILS AND SIZES NOT SHOWN ON PLANS.
- COLD AND HOT WATER PIPING SHALL BE COPPER WATER TUBE (ASTM B88) TYPE "L" WITH WROUGHT-COPPER (ANSI B16.22), OR CAST BRASS (ANSI B16.18) PRESSURE FITTINGS AND ALLOY GRADE (ANSI-ASTM B32) 95TA LEAD-FREE SOLDER JOINTS. DISINFECT WATER PIPING AFTER PRESSURE TEST WITH CHLORINE SOLUTION 50 MG/L) FOR 24 HOURS. FLUSH LINES CLEAN AFTER COMPLETION.
- SOIL, WASTE AND VENT PIPING SHALL BE PVC; ASTM D2865 SCHEDULE 40. FITTINGS: PVC DWV JOINTS; ASTM WELD. PROVIDE CAST IRON PIPE AND FITTINGS FOR SOIL, WASTE AND VENT PIPING LOCATED IN CEILING PLENUMS.
- PROVIDE CLEANOUTS AT BASE OF EACH VERTICAL STACK AT EACH CHANGE OF DIRECTION OF HORIZONTAL RUNS AND AT 100 FOOT INTERVALS OF HORIZONTAL RUNS FOR SANITARY AND STORM PIPING.
- PROVIDE ACCESS PANELS TO ALL VALVES WITHIN CHASES OR ABOVE NON-ACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
- METERING AND SITE UTILITY CONNECTIONS SHALL BE PROVIDED ON SITE UTILITY DRAWINGS. ALL SERVICES SHOWN ON THIS SET OF PLANS TERMINATE 6'-0" FROM BUILDING, UNLESS SHOWN OTHERWISE ON DRAWINGS. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO SITE UTILITIES.
- FURNISH AND INSTALL HOSE BIBBS AND/OR WALL HYDRANTS 24" ABOVE FINISHED GRADE/FLOOR AND PROVIDE VACUUM BREAKERS.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF ROOF DRAINS, PLUMBING FIXTURE MOUNTING HEIGHTS AND DIMENSIONS.
- CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF EXISTING SEWERS IN WHICH NEW SEWER LINES ARE TO BE CONNECTED PRIOR TO INSTALLATION.
- CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
- CONTRACTOR SHALL ROUGH-IN ALL WASTE AND SUPPLIES TO SPECIAL EQUIPMENT ACCORDING TO MANUFACTURER'S SHOP DRAWINGS AND MAKE FINAL CONNECTIONS. ALL SUPPLIES SHALL BE VALVED. INSTALL VACUUM BREAKERS WHERE REQUIRED BY CODE.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (INCLUDING PIPE ROUTING AND EQUIPMENT LOCATIONS) TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO THE INSTALLATION OR PURCHASING OF ANY PIPING AND/OR EQUIPMENT.
- PROVIDE REDUCED PRESSURE BACKFLOW PREVENTERS FOR DOMESTIC WATER SUPPLY CONNECTIONS AS REQUIRED BY CODE.
- ALL BELOW GRADE/SLAB COPPER PIPE SHALL BE PLACED WITHIN COPPER PIPE SLEEVE (10 MIL) POLYETHYLENE PLASTIC SLEEVING. EXTEND SLEEVING ABOVE GRADE/SLAB.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF FLOOR DRAINS (IF ANY) LOCATED WITHIN TOILET ROOMS.
- PRESSURE REDUCING VALVES SHALL BE INSTALLED ON BRANCH LINES SERVING FIXTURES AND/OR EQUIPMENT WHEN THE PRESSURE IN THE LINE EXCEEDS 80 P.S.I.
- COORDINATE EXACT LOCATION OF FLOOR DRAINS FOR HVAC EQUIPMENT WITH MECHANICAL CONTRACTOR. CONDENSATE PIPING SHALL NOT DISCHARGE INTO SANITARY SYSTEM.
- ROUTE WATER LINES TIGHT TO STRUCTURE. COORDINATE ROUTING TO AVOID CONFLICTS WITH OTHER DISCIPLINES.
- IF THE INTENT OF THE DRAWINGS AND/OR SPECIFICATIONS IS UNCLEAR OR HAS MORE THAN ONE INTERPRETATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER IN WRITING BEFORE THE SUBMISSION OF BIDS. THE ARCHITECT/ENGINEER SHALL MAKE CORRECTIONS AND/OR PROVIDE EXPLANATION IN WRITING.
- PLANS AND SPECIFICATIONS ARE INTENDED AS A GENERAL DESCRIPTION OF THE WORK TO BE PERFORMED. ALL ITEMS NOT SPECIFICALLY MENTIONED OR SHOWN BUT NECESSARY FOR THE COMPLETION OF THE INSTALLATION, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. THE CONTRACTOR SHALL ACQUAINT HIMSELF WITH THE MECHANICAL, ARCHITECTURAL, STRUCTURAL AND ELECTRICAL PLANS PRIOR TO SUBMITTING HIS FINAL BID. NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO CONTRACTORS' FAILURE TO FAMILIARIZE HIMSELF WITH THE PLANS.
- THE CONTRACTOR SHALL BASE HIS PROPOSAL UPON THE EQUIPMENT AS SCHEDULED OR SPECIFIED, USING THE MANUFACTURERS AND EQUIPMENT SPECIFIED ON THE DRAWINGS. IF MORE THAN ONE MANUFACTURER IS SPECIFIED FOR ONE ITEM, ANY ONE OF THE MANUFACTURERS LISTED MAY BE USED IN THIS CONTRACTOR'S PROPOSAL. IF THIS CONTRACTOR WISHES TO USE EQUIPMENT NOT SPECIFIED, HE MUST AT THE TIME OF BIDDING SUBMIT SEPARATELY ON LETTERHEAD STATIONARY OF THE BIDDER, THE EQUIPMENT HE WOULD SUBSTITUTE AND THE COST TO BE ADDED OR TO BE DEDUCTED FROM HIS PROPOSAL.
- THE CONTRACTOR IS EXPECTED TO ORDER ALL MATERIALS IN SUFFICIENT TIME TO AVOID DELAYING THE COMPLETION OF THE PROJECT. DELAY IN DELIVERY WILL NOT BE CONSIDERED A JUSTIFIABLE REASON FOR SUBMISSION OF SUBSTITUTE MATERIALS.
- DO NOT PENETRATE WALL FOOTINGS WITH PIPING. COORDINATE WITH GENERAL CONTRACTOR TO DROP FOOTINGS AS REQUIRED TO CLEAR PLUMBING SERVICES WHERE ABSOLUTELY NECESSARY. ALL PIPING PENETRATING A BEARING WALL OR FOOTING MUST BE SLEEVED AND LOCATION APPROVED BY STRUCTURAL ENGINEER.
- REFER TO PLANS FOR VENT THRU ROOF (VTR) PIPE SIZES AND LOCATIONS. LOCATE VTR A MIN. 10' HORIZONTAL FROM ANY BUILDING OPENING OR FRESH AIR INTAKE. EXTEND VTR 12" ABOVE ROOF SURFACE. IF 10' DISTANCE CANNOT BE ACHIEVED LOCATE VTR 2" ABOVE ADJACENT TOP OF FRESH AIR INTAKE OR BUILDING OPENINGS. PROVIDE 1" FIBERGLASS INSULATION WITH ALL SERVICE JACKET ON VENT PIPE INSIDE BUILDING WITHIN 6' OF VTR LOCATION. VERIFY FLASHING AND COUNTERFLASHING AND COORDINATE INSTALLATION WITH ROOFING CONTRACTOR.

**SYMBOLS AND ABBREVIATIONS**

DESCRIPTION	ABBR	SYMBOL
SANITARY PIPE ABOVE GRADE	SAN	—
SANITARY PIPE BELOW GRADE	SAN	—
VENT PIPE	V	—
COLD WATER PIPE	CW	—
HOT WATER PIPE	HW	—
STORM ABOVE GRADE	ST	—
STORM BELOW GRADE	ST	—
STORM OVERFLOW	STO	—
ROOF DRAIN	RD	⊙
FLOOR CLEANOUT	CO	⊙
EXTERIOR CLEANOUT	ECO	⊙
WALL CLEANOUT	WCO	⊙
HOSE BIBB	HB	—
VENT THRU ROOF	VTR	—
DIRECTION OF FLOW		—
SHUT OFF VALVE		—
CAP	—	—
TEE UP	—	—
TEE DOWN	—	—
ELBOW UP	—	—
ELBOW DOWN	—	—
REVISION REFERENCE		—
TYPICAL	TYP	—

\*SOME SYMBOLS SHOWN MAY NOT PERTAIN TO THIS PROJECT

**FIXTURE SPECIFICATIONS**

TAG	FIXTURE	MANUFACTURER	MODEL #	PIPE SIZE				DESCRIPTION
				CW	HW	SAN	VENT	
(WC-1)	WATER CLOSET PRESSURE ASSISTED FLUSH TANK (ADA)	AMERICAN STANDARD	2377.100	1/2"	-	4"	2"	ADA COMPLIANT PRESSURE ASSISTED WATER CLOSET. VITREOUS CHINA 2-PIECE CONSTRUCTION. PROVIDE WITH MANUFACTURERS RECOMMENDED ANGLE SUPPLY STOPS AND SUPPLY TUBING AND INSTALLATION MATERIALS. PROVIDE WITH ANTIMICROBIAL OPEN FRONT COVERLESS SEAT.
(L-1)	LAVATORY HUNG	AMERICAN STANDARD	0355.012	1/2"	1/2"	2"	1-1/2"	ADA COMPLIANT WALL HUNG VITREOUS LAVATORY. PROVIDE ANGLE SUPPLIES, P-TRAP, PIPING INSULATION WRAP, DRAIN GRID AND INSTALLATION MATERIALS. INSTALL AS REQUIRED TO MEET ADA GUIDELINES. PROVIDE FAUCET 2422.00 WITH WREST BLADE HANDLES. INSTALL USING MANUFACTURERS RECOMMENDATIONS.
(EW-2)	ELECTRIC WATER COOLER	ELKAY HI-LO	EZSTLBC	1/2"	-	2"	1-1/2"	BARRIER FREE ADA COMPLIANT ELECTRIC WATER COOLER. COORDINATE POWER OUTLET LOCATION WITH ELECTRICAL CONTRACTOR FOR ELECTRICAL CORD WITH 3-PRONG PLUG. INSTALL PER MANUFACTURERS RECOMMENDATIONS. REFER TO ARCHITECTURAL ELEVATION VIEWS FOR MOUNTING HEIGHTS.
(FCO)	FLOOR CLEANOUT	ZURN	Z1400	-	-	-	-	FLOOR CLEANOUT WITH ACCESS COVER. SEE PLANS FOR PIPE SIZE CONNECTION.
(WCO)	WALL CLEANOUT	ZURN	Z1446	-	-	-	-	WALL CLEANOUT WITH STAINLESS STEEL ROUND ACCESS COVER. SEE PLANS FOR PIPE SIZE CONNECTION.
(ECO)	EXTERIOR CLEANOUT	ZURN	Z-1400-HD	-	-	-	-	HEAVY TRAFFIC AREA EXTERIOR CLEANOUT WITH ACCESS COVER AND TWO-WAY FITTING. SEE PLANS FOR PIPE SIZE CONNECTION.
(HBT)	HOSE BIBB	WOODFORD	B24	3/4"	-	-	-	BRASS HOSE BIBB WITH POLISHED CHROME FINISH. VANDAL PROOF VACUUM BREAKER. BACK FLOW PREVENTER. 3/4" MALE HOSE THREAD. WHEEL HANDLE ENCLOSED IN BRASS CASTING, CHROME PLATED, LOCKING RECESSED BOX OPERATED BY LOOSE KEY.

NOTE: REFER TO ARCHITECTURAL DRAWINGS FOR ALL FINAL LOCATIONS AND MOUNTING DIMENSIONS OF ALL PLUMBING FIXTURES. PROVIDE ADA CONFORMING FACTORY INSULATION KIT ON HOT, COLD AND P-TRAP WASTE PIPING AT HANDICAP DESIGNATED LAVATORIES.

**PIPING MATERIAL SCHEDULE**

SERVICE	SIZE	MATERIAL	SCHEDULE/TYPE	INSULATION		REMARKS
				TYPE	THICKNESS	
COLD WATER	ALL	COPPER	TYPE L	FG	1"	SEE NOTE 2
SANITARY	ALL	C.I. OR PVC	NOTE 3	NONE	-	NO HUB
VENT	ALL	C.I. OR PVC	SCH. 40	NONE	-	SEE NOTE 1

**WATER HAMMER ARRESTOR SCHEDULE**

INSTALLED ARRESTOR SHALL BE APPROVED DEVICE BY FLORIDA PLUMBING CODE. ALL SUPPLY PIPING SHALL HAVE ARRESTOR THE SAME SIZE AS CONNECTION SIZE UP TO 1" I.E. PROVIDE P.D.I. SIZE "C" FOR 1" OR LARGER WATER SUPPLY TO FIXTURES; P.D.I. SIZE "B" FOR 3/4" SUPPLY AND P.D.I. SIZE "A" FOR 1/2" SUPPLY.

* P.D.I. SIZE	CONNECTION SIZE
A (1-11 F.U.)	1/2"
B (12-32 F.U.)	3/4"
C (33-60 F.U.)	1"

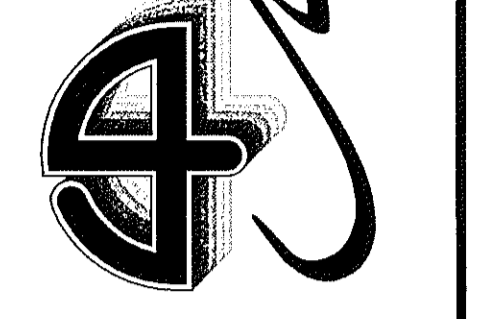
P.D.I. = PLUMBING AND DRAINAGE INSTITUTE STANDARD WH-201

**DRAWING INDEX**

SHEET	TITLE
P001	Plumbing General Information
P101	Plumbing Floor Plan

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CLIENT NAME

**Outparcel 5 @ Palm Coast Landing**  
N.E.C. SR 100 and Belle Terre Parkway  
Palm Coast, Florida

PROJECT NAME

**Plumbing General Information**

SHEET TITLE

JOSEPH F. KEENE  
P.L.# 80322

RELEASE

PROJECT NO.	208590
DATE	08/26/09
DRAWN	TJB
CHECKED	JFK

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