

AERIAL PHOTO

SUNRAY RETAIL  
PASCO COUNTY, FLORIDA

DRAWING INVALID UNLESS SIGNED, DATED & SEALED BY REGISTERED PROFESSIONAL

JAMIE P. GRARDI, P.E. # 99332

**REGENCY**  
Design & Engineering, Inc.

9400 RIVER CROSSING BUSINESS SUITE 104 NEWPORT SPICER, FLORIDA 34655  
727-325-1155 FAX 727-375-1156  
CERTIFICATE OF AUTHORIZATION NO. 28366

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DATE	REV. BY	REV. NO.	REVISION

SHEET

2

GENERAL NOTES

- 1. THE PROPERTY DESCRIPTION SHOWN HEREON WAS PROVIDED BY THE CLIENT.
2. EXISTING INSTRUMENTS, IF ANY, REFLECTING EASEMENTS, RIGHTS-OF-WAY, RESTRICTIONS AND/OR OWNERSHIP, WERE NOT FURNISHED EXCEPT AS SHOWN HEREON.
3. UNDERGROUND INSTALLATIONS OR IMPROVEMENTS, INCLUDING BUILDING FOUNDATIONS, HAVE NOT BEEN LOCATED EXCEPT AS SHOWN HEREON.
4. ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988. x5.4 DENOTES ELEVATION IN FEET.
5. THE PROPERTY SHOWN HEREON IS SUBJECT TO THE RULES, REGULATIONS, ORDINANCES AND/OR JURISDICTIONS OF LOCAL, STATE AND/OR FEDERAL AGENCIES, IF ANY. THE REQUIREMENTS OF SAID REGULATIONS, ORDINANCES AND/OR JURISDICTIONS ARE NOT SHOWN HEREON UNLESS STATED OTHERWISE.
6. BEARINGS SHOWN HEREON ARE BASED ON AN ASSUMED BEARING OF NORTH 01°22'18" EAST, FOR THE EAST RIGHT-OF-WAY LINE OF STATE ROAD 55 (U.S. 19).
7. THE PROPERTY SHOWN HEREON APPEARS TO BE LOCATED IN ZONE "AE" WITH A BASE FLOOD ELEVATION OF 10' PER F.I.R.M. PANEL NO. 12101C0353F, DATED SEPTEMBER 26, 2014.
8. THE IDENTIFICATION OF THE TREES SHOWN HEREON IS FOR INFORMATIONAL PURPOSES ONLY. A CERTIFIED ARBORIST SHOULD BE CONSULTED TO CONFIRM ACCURATE SPECIES IDENTIFICATION.
9. PROJECT BENCH MARK NO. 1: FOUND NAIL & DISK MARKED KING LB 2610 AT THE SOUTHEAST CORNER OF THE PROPERTY. ELEVATION = 9.38'
PROJECT BENCH MARK NO. 2: FOUND NAIL & DISK MARKED KING LB 2610 AT THE NORTHEAST CORNER OF THE PROPERTY. ELEVATION = 9.68'

PLAT OF SURVEY

TRACT 8 IN THE NORTHEAST 1/4 OF SECTION 30, TOWNSHIP 26 SOUTH, RANGE 16 EAST, TAMPA AND TARPON SPRINGS LAND COMPANY SUBDIVISION, ACCORDING TO THAT PLAT THEREOF AS RECORDED IN PLAT BOOK 1, PAGE 69 OF THE PUBLIC RECORDS OF PASCO COUNTY, FLORIDA, LESS AND EXCEPT ANY PORTION OF SAID TRACT DESCRIBED IN OFFICIAL RECORDS BOOK 3241, PAGE 1922 AND ANY PORTION WITHIN RIGHT OF WAYS, AS DESCRIBED IN EXHIBIT "A" OF THE TITLE COMMITMENT.

SAID PROPERTY BEING THE SAME AS THE FOLLOWING DESCRIBED PROPERTY

A PORTION OF TRACT 8 OF THE TAMPA-TARPON SPRINGS LAND COMPANY'S SUBDIVISION OF SECTION 30, TOWNSHIP 26 SOUTH, RANGE 16 EAST, AS SHOWN ON THE PLAT RECORDED IN PLAT BOOK 1, PAGES 68, 69 AND 70 OF THE PUBLIC RECORDS OF PASCO COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF THE NORTHEAST 1/4 OF SAID SECTION 30; THENCE NORTH 89°17'51" EAST, A DISTANCE OF 195.00 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF STATE ROAD 55 (U.S. HIGHWAY 19); THENCE ALONG SAID EASTERLY RIGHT-OF-WAY LINE, SOUTH 01°22'18" WEST, A DISTANCE OF 1,353.71 FEET TO A POINT ON THE SOUTHERLY BOUNDARY LINE OF THE PARCEL DESCRIBED IN OFFICIAL RECORDS BOOK 7696, PAGE 0947 OF SAID PUBLIC RECORDS FOR A POINT OF BEGINNING; THENCE ALONG SAID SOUTHERLY BOUNDARY LINE NORTH 89°09'06" EAST, A DISTANCE OF 151.66 FEET TO A POINT ON THE WESTERLY BOUNDARY LINE OF SAID PARCEL; THENCE ALONG THE WESTERLY BOUNDARY LINE OF SAID PARCEL SOUTH 00°50'54" EAST, A DISTANCE OF 200.00 FEET TO THE NORTHERLY RIGHT-OF-WAY LINE OF SUNRAY DRIVE AS RECORDED IN OFFICIAL RECORDS BOOK 4244, PAGE 0590 OF SAID PUBLIC RECORDS; THENCE ALONG SAID NORTHERLY RIGHT-OF-WAY LINE SOUTH 89°09'06" WEST, A DISTANCE OF 159.41 FEET TO THE EASTERLY RIGHT-OF-WAY LINE OF SAID STATE ROAD 55; THENCE ALONG SAID EASTERLY RIGHT-OF-WAY LINE NORTH 01°22'18" EAST, A DISTANCE OF 200.15 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL CONTAINS 0.7 ACRES MORE OR LESS. (CLOSES 0.003' J.M.M.)

COMMENTS REGARDING FIRST AMERICAN TITLE INSURANCE COMPANY'S COMMITMENT FOR TITLE INSURANCE, FILE NO. 2061-3355615, DATED MAY 3, 2015.

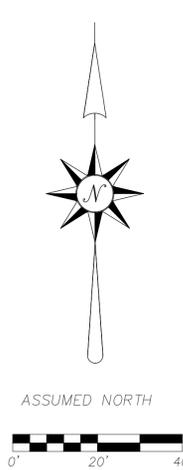
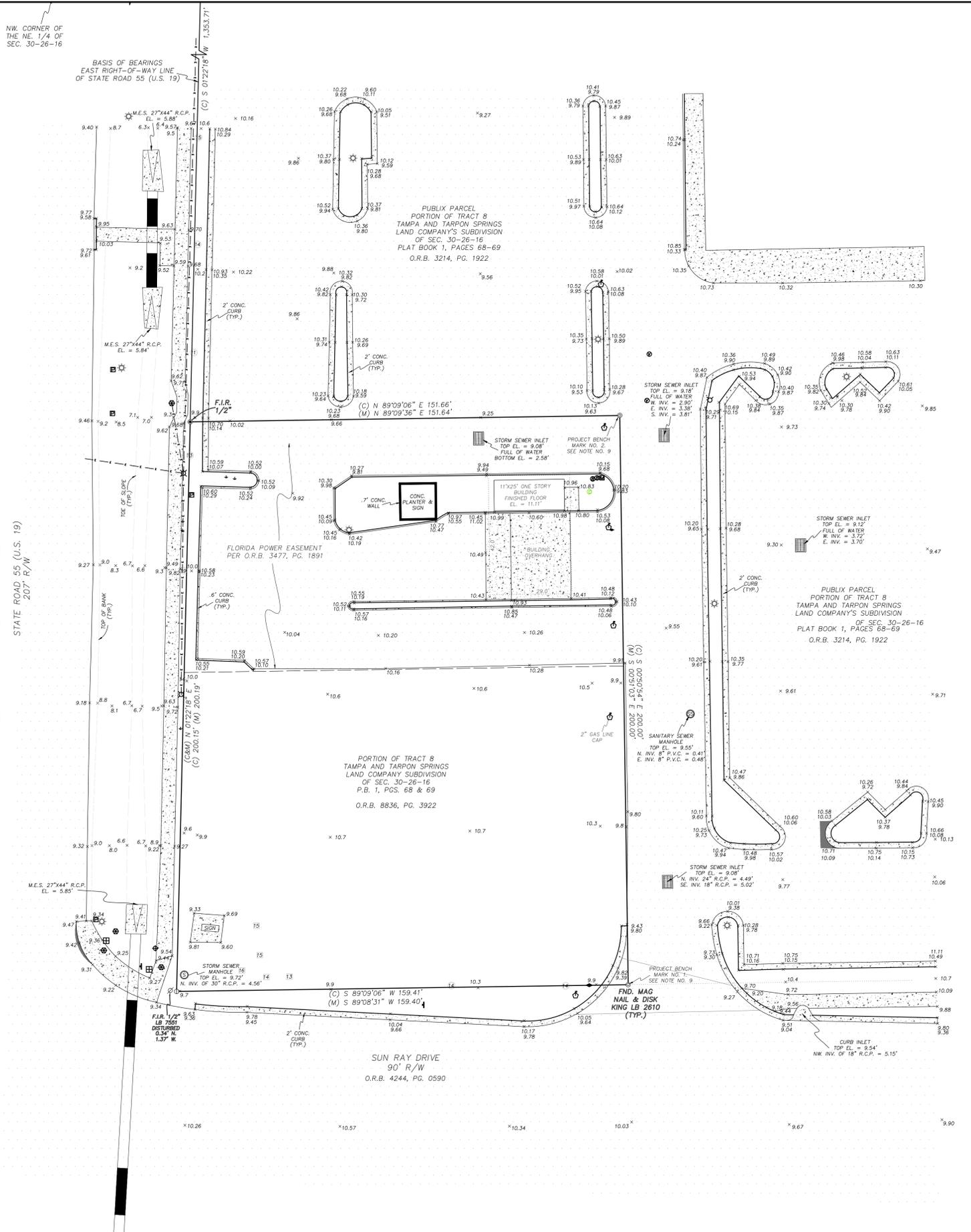
SCHEDULE B II EXCEPTIONS

- ITEM NO. 9 NOT MATTERS OF SURVEY
ITEM NO. 10 NOT MATTERS OF SURVEY

ITEM NO. 11 THE PROPERTY SHOWN HEREON IS SUBJECT TO THE DECLARATION OF COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS, INCLUDING ANY AMENDMENTS OR MODIFICATIONS THERETO, RECORDED IN BOOK 3241, PAGE 1928 AS AMENDED BY ASSIGNMENT AND ASSUMPTION AGREEMENT RECORDED IN BOOK 3241, PAGE 1961 AND AMENDMENT TO DECLARATION OF RESTRICTIONS AND GRANT OF EASEMENTS RECORDED IN BOOK 3264, PAGE 1220, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS OR NATIONAL ORIGIN TO THE EXTENT SUCH COVENANTS, CONDITIONS OR RESTRICTIONS VIOLATE 42 USC 3604(C), NOT PLOTTABLE.

ITEM NO. 12 THE PROPERTY SHOWN HEREON IS SUBJECT TO AN EASEMENT GRANTED TO FLORIDA POWER CORPORATION, A FLORIDA CORPORATION BY INSTRUMENT RECORDED IN BOOK 3477, PAGE 1891. - GRAPHICALLY SHOWN.

WORK ORDER NO.: 150096
FOR: REGENCY DESIGN & ENGINEERING
DATE OF SURVEY: AUGUST 31, 2015
TYPE OF SURVEY: BOUNDARY & TOPOGRAPHIC



- PG. = PAGE
INV. = INVERT
RNG. = RANGE
FND. = FOUND
SEC. = SECTION
EL. = ELEVATION
(TYP.) = TYPICAL
TWP. = TOWNSHIP
P.B. = PLAT BOOK
CONC. = CONCRETE
R/W = RIGHT-OF-WAY
(M) = MEASURED DATA
(C) = CALCULATED DATA
F.I.R. = FOUND IRON ROD
M.E.S. = MITERED END SECTION
O.R.B. = OFFICIAL RECORDS BOOK
R.C.P. = REINFORCED CONCRETE PIPE
14 = OAK TREE - DIAMETER IN INCHES
13 = PALM TREE - DIAMETER IN INCHES
1 = 1 INCH BACK FLOW PREVENTOR
\* = LIGHT POLE
C = STORM SEWER MANHOLE
F = FIRE HYDRANT
V = WATER VALVE
G = GAS LINE MARKER
+ = GAS VALVE
S = STREET SIGN
X = CROSSWALK SIGN
T = TRAFFIC SIGNAL BOX
A = GUY ANCHOR
U = UTILITY POLE
P = POWER PEDESTAL
I = SET 5/8" IRON ROD MARKED PRECISION LB-6734
S = SANITARY SEWER MANHOLE
SV = SEWER VALVE MANHOLE
A = ASPHALT PAVING
C = CONCRETE
-- = OVERHEAD UTILITY LINE

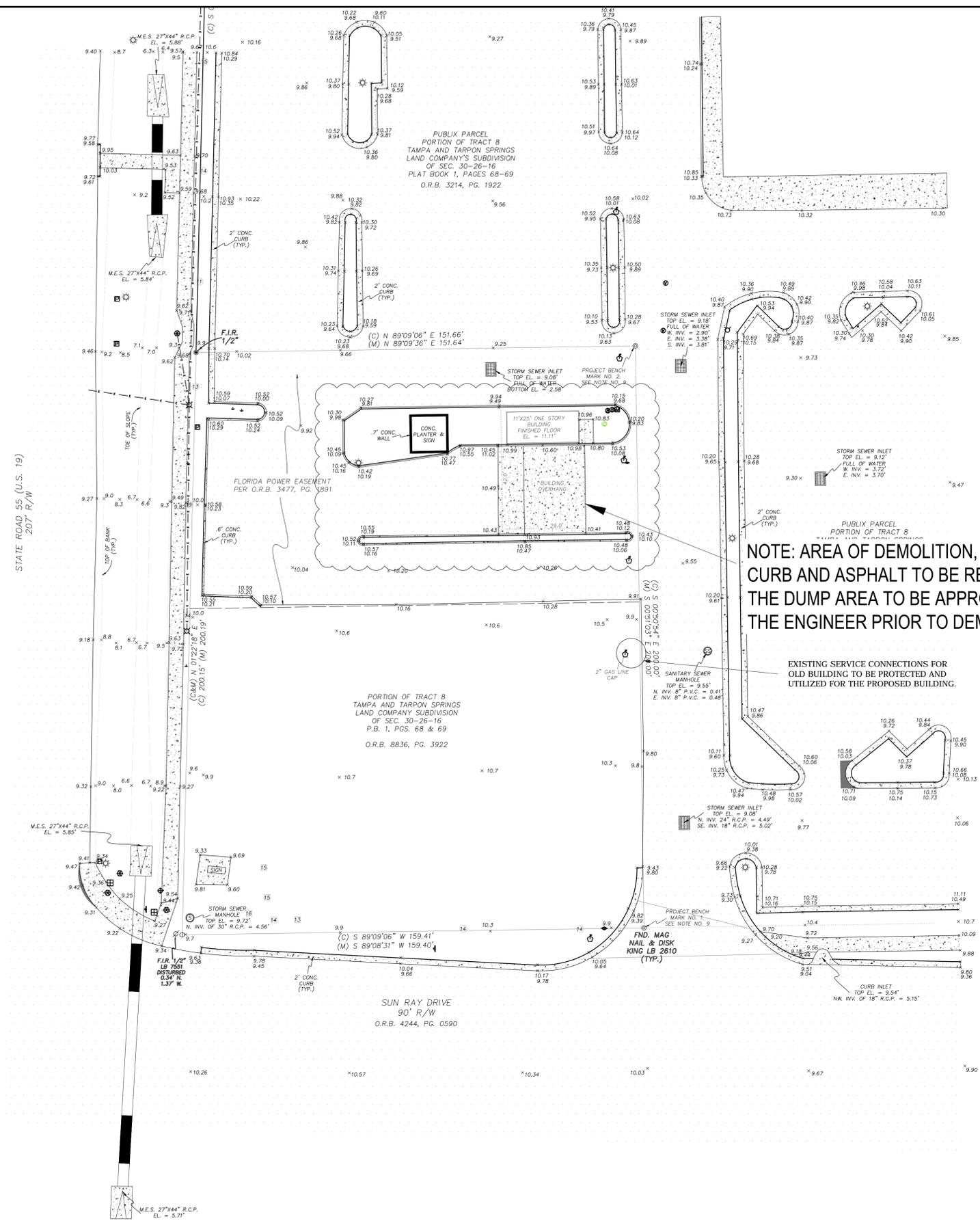
JON S. ROBBINS DATE
PROFESSIONAL SURVEYOR & MAPPER NO. 4452
NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR & MAPPER.

SWAING AND ASSOCIATES, INC.
REGISTERED PROFESSIONAL

REGENCY Design & Engineering, Inc.
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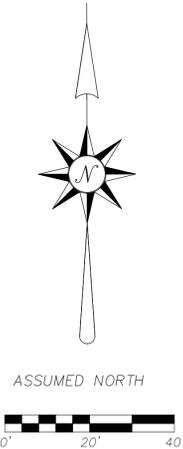
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Table with columns: DATE, REV. BY, REV. NO., REVISION



**NOTE: AREA OF DEMOLITION, ALL BUILDINGS, CURB AND ASPHALT TO BE REMOVED FROM SITE. THE DUMP AREA TO BE APPROVED BY THE ENGINEER PRIOR TO DEMOLITION.**

EXISTING SERVICE CONNECTIONS FOR OLD BUILDING TO BE PROTECTED AND UTILIZED FOR THE PROPOSED BUILDING.



**LEGEND**

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- ▨ = ASPHALT PAVING
- ▨ = CONCRETE
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DEMOLITION PLAN

SUNRAY RETAIL  
PASCO COUNTY, FLORIDA

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SHEET

4

## GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION IN ACCORDANCE WITH THE LINES AND GRADES SHOWN ON THE PLANS AND TO TOLERANCES STATED HEREIN OR IN THE SPECIFICATIONS. REFER TO THE BOUNDARY AND TOPOGRAPHIC SURVEY FOR ADDITIONAL INFORMATION ON HORIZONTAL AND VERTICAL CONTROL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL HORIZONTAL AND VERTICAL CONTROL MARKERS AND PROPERTY CORNERS (MONUMENTS, PIPES, ETC.) FOR THE DURATION OF CONSTRUCTION. MARKERS SHALL BE CONTINUOUSLY FLAGGED AND SHALL BE RESET IMMEDIATELY BY A FLORIDA LICENSED LAND SURVEYOR IF ANY SHOULD BECOME DISTURBED.
3. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE DRAWINGS AND DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, ETC. AFFECTING HIS WORK PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO POSSIBLE INCIDENTAL CONFLICTS WITH EXISTING STRUCTURES SUCH AS MAIL BOXES, SIGNS, FENCES, BILLBOARDS, ETC. AND SHALL INCLUDE IN HIS OVERALL COSTS THE REMOVAL AND/OR REPLACEMENT AND PROTECTION OF SUCH INCIDENTAL ITEMS.
5. THE CONTRACTOR, PRIOR TO BIDDING THIS WORK, SHALL APPRAISE HIMSELF AS TO ALL ABOVE GROUND FEATURES, AND AS TO THE EXTENT POSSIBLE WITHOUT EXCAVATING BELOW GROUND FEATURES, THAT HE MAY ENCOUNTER DURING CONSTRUCTION AND INCLUDE INTO HIS OVERALL BID ALL COSTS FOR SPECIFIC CONSTRUCTION METHODS AND PROCEDURES THAT NEED TO BE TAKEN TO WORK AROUND SUCH APPURTENANCES.
6. THE CONTRACTOR SHALL REPLACE ALL PAVING, STABILIZED EARTH, DRIVEWAYS, SIDEWALKS, RETAINING WALLS, MAIL BOXES, SOD, LANDSCAPING, ETC. REMOVED OR DAMAGED DURING CONSTRUCTION WITH THE SAME MATERIAL REMOVED OR DAMAGED OR AS DIRECTED BY THE ENGINEER.
7. THE CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH ANY SITE WORK WITH WHICH A CONFLICT HAS ARISEN DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS.
8. CONSTRUCTION SHALL BE CARRIED OUT "IN THE DRY". THE CONTRACTOR SHALL REVIEW SITE CONDITIONS AND DETERMINE METHODS AND EXTENT OF DEWATERING NECESSARY AND SHALL INCLUDE COSTS OF DEWATERING IN THE BID. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR CONTROL OF GROUND OR SURFACE WATER OR FOR ADDITIONAL MATERIALS OR REWORK REQUIRED AS A RESULT OF INADEQUATE OR INSUFFICIENT DEWATERING.
9. ALL WORK TO BE PERFORMED FOR THE COMPLETION OF THIS PROJECT SHALL BE CONSTRUCTED ACCORDING TO THE BEST PRACTICES OF THE INDUSTRY AND IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, COUNTY AND/OR COUNTY CODES, ORDINANCES, STANDARDS AND PERMIT CONDITIONS.
10. ALL AREAS DISTURBED BY THIS CONSTRUCTION SHALL BE SEEDDED AND MULCHED EXCEPT AS NOTED BELOW. ALL AREAS WITH SLOPES GREATER THAN 4:1 OR WITHIN 2' OF ANY PAVED OR CURB SHALL BE SODDED. ALL AREAS WITHIN 5' OF ANY DRAINAGE STRUCTURE OR WITHIN FOOT OR COUNTY R/W SHALL BE SODDED.
11. ALL AREAS DISTURBED WITHIN EXISTING COUNTY AND FOOT RIGHTS-OF-WAY SHALL BE SODDED UNLESS OTHERWISE NOTED. ALL LANDSCAPING WITHIN RIGHT-OF-WAY SHALL CONFORM TO PASCO COUNTY AND F.D.O.T. STANDARDS.
12. THE CONTRACTOR SHALL PROVIDE FOR SAFE AND EFFICIENT MAINTENANCE OF TRAFFIC, INCLUDING PEDESTRIANS, VIA ADHERENCE TO THE F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARD INCLUDES 600-680 (2004 EDT), THE U.S.D.O.T. MANUAL OR UNIFORM TRAFFIC DEVICES (MUTCO), AND THE REQUIREMENTS OF PASCO COUNTY.
13. ALL DIMENSIONS SHOWN, WHERE CURB IS APPLICABLE, ARE TO THE BACK OR CURB. PIPE LENGTHS SHOWN, WHERE MITERED ENDS ARE CALLED FOR, INCLUDE IN THE PIPE LENGTH PLUS THE "T" DIMENSION FOR THE MITERED END SECTIONS. PIPE.

## ROAD, DRAINAGE AND GRADING CONSTRUCTION NOTES

1. ALL PAVEMENT AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS AND THE LATEST EDITION OF THE FOOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. IMPROVEMENTS WITHIN PUBLIC RIGHTS-OF-WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OR PASCO COUNTY DEPARTMENT HAVING JURISDICTION OVER THE ROAD.
2. PAVEMENT AND GRADING SHALL BE SLOPED TO THE PROPOSED ELEVATIONS AND CONTOURS SHOWN ON THE DRAWINGS. SMOOTH, CONSTANT SLOPES SHALL BE MAINTAINED BETWEEN PROPOSED ELEVATIONS AND CONTOURS. PROPOSED CONTOUR ELEVATIONS, SPOT ELEVATIONS AND FINISHED GRADE ELEVATIONS IN NON-PAVED AREAS REFER TO FINISHED SURFACE ELEVATION UNLESS SODDING OR SEEDING IS COMPLETE.
3. FINISHED GRADE ADJACENT TO BUILDING WALLS SHALL BE 4-INCHES BELOW FINISHED FLOOR WITH A MINIMUM OF 2 PERCENT DOWNWARD SLOPE AWAY FROM BUILDING. FINISHED GRADES ADJACENT TO WALLS, CURBS OR SLABS SHALL BE 2-INCHES BELOW ADJACENT SURFACE FOR DRAINAGE AWAY OR FLUSH WITH SURFACE FOR DRAINAGE TOWARD PAVEMENT OR CURB.
4. ALL STORM SEWER PIPES SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) (ASTM C-76) UNLESS OTHERWISE NOTED AND INSTALLED AT THE LOCATIONS AND GRADES SHOWN ON THE DRAWINGS. PRECAST INLETS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE FOOT ROADWAY AND TRAFFIC DESIGN STANDARDS. ALL CROSS DRAINS SHALL BE STEEL REINFORCED CONCRETE PIPE (SRCP) NO EXCEPTION.
5. SIGNS, POSTS AND HARDWARE SHALL BE CERTIFIED BY FOOT AND INSTALLED IN ACCORDANCE WITH FOOT SPECIFICATIONS AND MUTCD OR GOVERNING AUTHORITY HAVING JURISDICTION OVER ROADS.
6. THE SOIL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO CONSTRUCTION, MAINTAINED THROUGHOUT CONSTRUCTION AND UNTIL THE SITE IS PERMANENTLY STABILIZED.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT AND MAINTAIN THE WATER RETENTION SYSTEM ON A REGULAR BASIS.
8. ALL SODDED SLOPES OVER 4:1 SHALL BE INSTALLED WITH SOD PEGS.
9. ALL FINISHED FLOOR ELEVATIONS SHALL BE A MINIMUM OF 1-FOOT ABOVE THE BASE FLOOD ELEVATION, OR AS REQUIRED BY THE LAND DEVELOPMENT CODE SECTION 701.
10. ANY OFF SITE DISTURBANCE SHALL BE RESTORED TO THE PRE-DEVELOPMENT CONDITION OR BETTER.
11. ALL DRAINAGE AND MAINTENANCE EASEMENTS MUST CONTAIN CLEAR OPERABLE ACCESSIBILITY.

## GEOTECHNICAL NOTES:

1. THE GEOTECHNICAL RECOMMENDATIONS FOR THE PROJECT ARE OUTLINED IN THE REPORT PREPARED BY BTL ENGINEERING SERVICES, INC. DATED SEPTEMBER 2015 FOR THE PROPOSED ONE STORY BUILDING AT 4547 SUNRAY DRIVE.
2. IF ANY UNSUITABLE MATERIAL IS FOUND DURING CONSTRUCTION (I.E., ORGANIC MATERIAL OR DEBRIS) IT SHOULD BE EXCAVATED AND REPLACED WITH COMPACTED INORGANIC GRANULAR BACKFILL. ALL BACKFILL SHOULD BE COMPACTED TO THE DENSITY SPECIFIED AS NOTED IN THE REPORT. EXCAVATION OF UNSUITABLE MATERIAL SHOULD EXTEND A MINIMUM DISTANCE OF 5 FEET BEYOND THE FOOTPRINT OF THE PROPOSED STRUCTURE.

### SITE PREPARATION

1. INITIAL SITE PREPARATION SHOULD CONSIST OF PERFORMING CLEARING, GRUBBING AND REMOVAL OF EXISTING FOUNDATION SYSTEM, ASPHALT PAVEMENT, TOPSOIL, VEGETATION, AND ASSOCIATED ROOT SYSTEMS TO A DEPTH OF THEIR VERTICAL REACH. THIS SHOULD BE DONE WITHIN AND TO A MINIMUM DISTANCE OF 5 FEET BEYOND THE PERIMETER OF THE PROPOSED BUILDING FOOTPRINT. THE STRIPPED TOPSOIL SHOULD BE STOCKPILED ON-SITE FOR LATER USAGE IN LANDSCAPE (NON-STRUCTURAL) AREAS ONLY.
2. UPON COMPLETION OF THE CLEARING, GRUBBING AND REMOVAL OF EXISTING FOUNDATION SYSTEM & TOPSOIL AS NOTED ABOVE, PERFORM PROOFROLLING WITH A VIBRATORY ROLLER. A HEAVY WEIGHT VIBRATORY DRUM ROLLER HAVING TOTAL STATIC WEIGHT (INCLUDING FUEL AND WATER) OF AT LEAST 10 TONS AND A DRUM DIAMETER OF 3.5 TO 4.5 FEET IS RECOMMENDED. REGARDLESS OF THE DEGREE OF COMPACTION ACHIEVED, A MINIMUM OF 6 PERPENDICULAR OVERLAPPING PASSES SHOULD BE MADE IN THE BUILDING FOOTPRINT WITH THE COMPACTION EQUIPMENT IN ORDER TO INCREASE THE DENSITY AND IMPROVE THE UNIFORMITY OF THE UNDERLYING LOOSE SANDY SOILS. UPON COMPLETION OF THE PROOFROLLING, DENSITY TESTS SHALL BE PERFORMED TO CONFIRM A MINIMUM COMPACTION COMPLIANCE OF 95 PERCENT OF MODIFIED PROCTOR MAXIMUM DENSITY (ASTM D-1557). THE ROLLER COVERAGES SHOULD BE DIVIDED EVENLY INTO TWO PERPENDICULAR DIRECTIONS, WHERE POSSIBLE. ADDITIONAL PASSES MAY BE NECESSARY IF COMPLIANCE COMPACTION IS NOT ACHIEVED.
3. PLACE FILL MATERIALS IN UNIFORM LIFTS OF 12 INCHES, TO FINISH FINISHED GRADE. THE FILL MATERIAL SHOULD BE INORGANIC (CLASSIFIED AS SP, SW, GP, GW, SP-SM, SW-SM, GP-GM, GW-GM) CONTAINING NOT MORE THAN 5 PERCENT (BY WEIGHT) ORGANIC MATERIALS. FILL MATERIALS WITH SILT-SIZE SOIL FINES IN EXCESS OF 12% SHOULD NOT BE USED. PLACE FILL IN MAXIMUM 12-INCH LIFTS AND COMPACT EACH LIFT TO A MINIMUM DENSITY OF 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557) WITH A VIBRATORY ROLLER AS MENTIONED IN ITEM #2.
4. PERFORM COMPLIANCE TESTS WITHIN THE FILL AT A FREQUENCY OF NOT LESS THAN ONE TEST PER 2,500 SQUARE FEET PER LIFT (5 GREATER).
5. UPON COMPLETION OF THE BUILDING FOOTING EXCAVATION AND PRIOR TO PLACEMENT OF REINFORCING STEEL AND CONCRETE, WE RECOMMEND COMPACTION OF THE BOTTOM OF THE FOOTINGS WITH THE VIBRATORY COMPACTOR OVER EACH FOOTING. THE BOTTOM OF FOOTINGS SHALL BE EXAMINED BY THE ENGINEER OR HIS REPRESENTATIVE TO DETERMINE IF THE SOIL IS VERTICALLY FREE OF ALL ORGANIC AND/OR DELETERIOUS MATERIAL, AND IF THE COMPACTION AND SOIL PRESSURES ARE ACHIEVED OR IF ADDITIONAL COMPACTION IS REQUIRED. PERFORM COMPLIANCE TESTS WITHIN THE FOOTINGS AS NOTED IN SECTION 7.4.
6. THE CONTRACTOR SHALL TAKE INTO ACCOUNT THE FINAL CONTOURS AND GRADES AS ESTABLISHED BY THE PLAN WHEN EXECUTING HIS BACKFILLING AND COMPACTION OPERATIONS.
7. USING VIBRATORY COMPACTION EQUIPMENT AT THIS SITE MAY DISTURB ADJACENT STRUCTURES. CARE SHALL BE TAKEN DURING THE EXCAVATION, PROOFROLLING AND COMPACTION OPERATIONS TO INSURE ANY ADJACENT STRUCTURES AND UTILITIES ARE NOT ADVERSELY AFFECTED. WE RECOMMEND THAT YOU MONITOR NEARBY STRUCTURES BEFORE AND DURING PROOFROLLING COMPACTION OPERATIONS.

### PAVEMENT SITE PREPARATION

1. THE PROPOSED CONSTRUCTION LIMITS SHOULD BE CLEARED, STRIPPED AND GRUBBED OF ALL CONSTRUCTION DEBRIS, VEGETATION AND ASSOCIATED ROOT SYSTEMS TO A DEPTH OF THEIR VERTICAL REACH. THIS SHOULD BE DONE WITHIN AND TO A DISTANCE OF 5 FEET BEYOND THE ROAD PERIMETER AND PARKING LOT.
2. PLACE FILL MATERIAL, AS REQUIRED. THE SUBGRADE SHOULD HAVE AT LEAST 12 INCHES OF STABILIZED SUBGRADE MATERIAL WITH A MINIMUM LIME/ROCK BEARING RATIO (LBR) OF 40. WE RECOMMEND MEDIUM DENSITY GRANULAR SOIL BE USED TO PREPARE THE SITE FOR THE PROPOSED PAVEMENT SECTION. UPON COMPLETION OF THE PROOF-ROLLING, DENSITY TESTS SHOULD BE PERFORMED AT A FREQUENCY OF ONE TEST PER 300 LINEAR FEET TO CONFIRM A MINIMUM COMPACTION COMPLIANCE OF 98 PERCENT OF MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T-180).
3. THE FILL MATERIAL SHOULD BE INORGANIC (CLASSIFIED AS SP/GW) CONTAINING NOT MORE THAN 5 PERCENT (BY WEIGHT) ORGANIC MATERIALS. FILL MATERIALS WITH SILT-SIZE SOIL FINES IN EXCESS OF 12% SHOULD NOT BE USED. PLACE FILL IN MAXIMUM 12-INCH LIFTS AND COMPACT EACH LIFT TO A MINIMUM DENSITY OF 98 PERCENT OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (AASHTO T-180) WITH A ROLLER AS MENTIONED PREVIOUSLY.
4. PERFORM COMPLIANCE TESTS WITHIN THE FILL AT A FREQUENCY OF ONE TEST PER 300 LINEAR FEET PER LIFT IN THE PAVEMENT AREAS, OR AT A MINIMUM OF TWO TEST LOCATIONS, WHICHEVER IS GREATER.
5. THE APPROPRIATE PAVEMENT SECTION SHOULD BE CONSTRUCTED IN ACCORDANCE TO SPECIFICATION PRESENTED EARLIER IN THIS REPORT.
6. THE CONTRACTOR SHALL TAKE INTO ACCOUNT THE FINAL CONTOURS AND GRADES AS ESTABLISHED BY THE PAVING AND DRAINAGE PLAN WHEN EXECUTING ANY BACKFILLING AND / OR COMPACTION OPERATIONS.

## ENVIRONMENTAL PROTECTION NOTES

1. CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED IN WETLAND AREAS UNLESS SUCH CONSTRUCTION PRACTICES ARE APPROVED IN A PLAN OF OPERATION SUBMITTED TO THE ENGINEER & THE APPROPRIATE AGENCIES. WHERE CONSTRUCTION IS NECESSARY ACROSS OR ADJACENT TO WETLAND JURISDICTIONAL AREAS, SILT BARRIERS SHALL BE INSTALLED AS SHOWN ON THE PLANS. SILT BARRIERS SHALL BE CONSIDERED LIMITS OF CONSTRUCTION WITHIN OR ADJACENT TO JURISDICTIONAL AREAS.
2. CONSTRUCTION SHALL PROCEED SUCH THAT ALL STORM WATER FACILITIES WITHIN A WATERSHED AREA ARE IN PLACE AND OPERATIONAL PRIOR TO CONSTRUCTION OF IMPERVIOUS SURFACES WITHIN THAT AREA.
3. STAKED OR FLOATING SILT SCREENS OR HAY BALES, AS APPROPRIATE, SHALL BE UTILIZED AS SILT BARRIERS AND PLACED IN LOCATIONS SHOWN ON THE PLANS AND AT OTHER LOCATIONS AS REQUIRED TO KEEP SEDIMENT FROM REACHING WATER BODIES OR WETLAND AREAS. THESE BARRIERS SHALL BE INSTALLED PRIOR TO COMMENCING WITH ANY CONSTRUCTION WITHIN OR ADJACENT TO JURISDICTIONAL AREAS. THE CONTRACTOR SHALL MONITOR AND MAINTAIN ALL SILT BARRIERS INCLUDING DAILY INSPECTIONS TO CHECK THEIR INTEGRITY. ANY LOOSE OR DAMAGED SILT BARRIERS SHALL BE IMMEDIATELY REPAIRED OR REPLACED, AS NECESSARY. ONCE CONSTRUCTION IS COMPLETE AND FINISH GRADING / STABILIZATION HAS BEEN ACHIEVED, SILT BARRIERS SHALL BE COMPLETELY REMOVED TO THE SATISFACTION OF THE OWNER AND PRIOR TO FINAL ACCEPTANCE.
4. ALL FUGITIVE DUST SHALL BE CONTROLLED ON SITE. ONLY AREAS SCHEDULED FOR IMMEDIATE CONSTRUCTION SHALL BE CLEARED OR STRIPPED OF VEGETATION. WATERING, APPLICATION OF 425-605 SILT STOP OR OTHER PRIOR APPROVED MEANS OF DUST CONTROL SHALL BE EMPLOYED TO PREVENT THE EMANATION OF DUST FROM THE SITE. PERMANENT GRASSING, LANDSCAPING AND OTHER SITE WORK SHALL BE INITIATED AS SOON AS POSSIBLE.
5. ALL WATER COLLECTED AND PUMPED DURING TRENCH DEWATERING ACTIVITIES SHALL BE DISPOSED OF IN ON-SITE UPLAND AREAS INTO DOUBLE STAKED HAY BALES. DISCHARGE LOCATIONS SHALL BE A MINIMUM OF 75 FEET FROM THE NEAREST SURFACE WATER BODY OR WETLAND AREA, TO ALLOW FOR MAXIMUM OVERLAND FILTRATION OF SOIL PARTICLES. CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT FOR APPROVAL PRIOR TO DEWATERING.
6. TEMPORARY STOCKPILES SHALL NOT BE LOCATED ADJACENT TO UNDISTURBED WETLANDS. ADDITIONALLY, STOCKPILES TO REMAIN FOR LONGER THAN 24 HOURS SHALL BE CONFINED BY SILT BARRIERS WHICH PREVENT RUNOFF SEDIMENTATION FROM ENCRoACHING UPON WETLAND AREAS OR SURFACE WATER BODIES.
7. ALL TRASH AND CONSTRUCTION DEBRIS PRODUCED FROM THIS PROJECT SHALL BE COLLECTED BY THE CONTRACTOR DAILY. THESE MATERIALS SHALL BE STAGED OR CONTAINERIZED AS NECESSARY TO PREVENT ACCIDENTAL RELEASE. DISPOSAL OF SOLID WASTE MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE MUNICIPAL, COUNTY AND STATE REGULATIONS.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING PORTABLE SANITARY WASTE UNITS ON-SITE FOR USE BY HIS EMPLOYEES DURING CONSTRUCTION.
9. THE CONTRACTOR SHALL MAINTAIN CONTROL OF ANY HAZARDOUS MATERIALS UTILIZED ON-SITE FOR CONSTRUCTION. STORAGE CONTAINERS, VEHICLES, ETC. WILL BE INSPECTED REGULARLY FOR LEAKAGE. A SPILL PREVENTION PLAN SHALL BE ESTABLISHED WHICH COVERS CLEANUP AND NOTIFICATION OF APPROPRIATE GOVERNMENT AGENCIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING SITE EROSION AND SHALL NOT UNNECESSARILY REMOVE EXISTING VEGETATION OR ALTER EXISTING TOPOGRAPHY. THE CONTRACTOR SHALL PROVIDE ADDITIONAL HAY BALES, SAND BAGS OR SEED & MULCH, AS NECESSARY, TO ACHIEVE AN EROSION-FREE SITE (FREE FROM RUTTING, ETC.) TO THE LINES AND GRADES SHOWN IN THE PLANS UNTIL FINAL ACCEPTANCE. ALL SWALES AND SURFACES 4:1 OR STEEPER SHALL BE SODDED. ALL OTHER SLOPES WHICH EXPERIENCE UNIFORM EROSION THAT CANNOT BE CONTROLLED BY OTHER MEASURES SHALL BE SODDED. ALL SOD SHALL BE ARGENTINE BANIA UNLESS SPECIFICALLY SHOWN OTHERWISE IN THE CONTRACT DOCUMENTS.
11. PRIOR TO THE START OF THE CLEARING OR GRUBBING, OR ANY SOIL DISTURBANCE, CONTACT PASCO COUNTY STORMWATER MANAGEMENT AT (727) 834-3611 FOR A SOIL EROSION AND SEDIMENT CONTROL PRE-INSPECTION MEETING.
12. THE CROSS-SLOPE OF THE SHOULDERS SHALL NOT BE STEEPER THAT 0.06 FEET PER FOOT.
13. THE SLOPE OF THE AREA WITHIN THE ROADSIDE CLEAR ZONE SHALL NOT BE STEEPER THAN SIX FEET HORIZONTAL TO ONE FOOT VERTICAL (6:1).
14. ALL SLOPES WITHIN THE COUNTY RIGHT-OF-WAY (OUTSIDE THE CLEAR ZONE) SHALL BE A MINIMUM OF 4:1.

## MINIMUM REQUIRED UTILITY AS-BUILTS

### PASCO COUNTY REQUIREMENTS

- UPON THE COMPLETION OF THIS PROJECT, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE COUNTY WITH A COMPLETE SET OF "RECORD DRAWINGS" OF STORM DRAINAGE, UTILITIES, AND OTHER SITE IMPROVEMENTS AS FURTHER HEREIN NOTED. THE CONTRACTOR SHALL MAINTAIN A LEGIBLY MARKED SET OF PLANS, DURING CONSTRUCTION, SHOWING THE ACTUAL CONSTRUCTION, LOCATION, AND LAYOUT OF THE PIPELINES AND APPURTENANCES AS THEY WERE INSTALLED. THE MARKED UP PLAN SHALL SHOW ALL VALVES, TAPS AND FITTINGS USED, PIPE CUTS, DIMENSIONS, MATERIAL TYPES, CLASS, COLOR, PIPE BEDDING MATERIAL AND INDICATE THE PROXIMITY OF THE INSTALLED PIPELINE TO ANY CROSSING OR OTHER PIPELINE, CONDUIT OR CABLE EXCAVATED DURING INSTALLATION. THE CONTRACTOR SHALL ALSO PROVIDE A SURVEY OF THE PIPELINE SHOWING THE LOCATION AND ELEVATION OF THE TOP OF PIPE AT EACH END AND AT 100 FT. STATIONING IN REFERENCE TO BOTH MEAN SEA LEVEL AND FINISH GRADE. THE SURVEY SHALL BE SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED WITH THE STATE OF FLORIDA. SIX COPIES OF THE AS-BUILTS ARE REQUIRED. FINAL PAYMENT TO THE CONTRACTOR SHALL NOT BE MADE WITHOUT THESE SUBMITTED AND APPROVED BY THE DESIGN ENGINEER.

### ADDITIONAL REQUIREMENTS

1. ALL DIMENSIONS SHALL BE IN FEET DIMENSIONED OFF CENTERLINE OF ROADS OR OTHER PERMANENT STRUCTURES; IF ONLY ONE DIMENSION CAN BE TAKEN OFF THE CENTERLINE OF ROAD, THE SECOND SHALL BE OFF A PERMANENT MARKER OR REFERENCE POINT.
2. AS-BUILTS SHALL BE SUBMITTED TO THE ENGINEER, SIGNED & SEALED BY A PROFESSIONAL SURVEYOR REGISTERED IN THE STATE OF FLORIDA.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING A RECORD SURVEY(S) PREPARED AND SUBMITTED BY A LICENSED PROFESSIONAL SURVEYOR AND MAPPER INCLUDING, BUT NOT LIMITED TO, LOCATION AND FINISHED GRADE ELEVATIONS IN PAVED AND NON-PAVED AREAS SUFFICIENT TO DETERMINE DIRECTION OF SITE DRAINAGE AND ELEVATIONS OF RETENTION/DETENTION AREAS, MITIGATION AREAS AND DITCH/CHANNEL CONVEYANCES INCLUDING TOP OF BANKS, TOES OF SLOPES, POND BOTTOMS AND WATER LEVELS; ELEVATIONS AND DIMENSIONS OF POND CONTROL STRUCTURES, SPILLWAYS AND UNDERDRAINS; DRAINAGE STRUCTURE GRATE/INLET/RIM ELEVATIONS, STORM PIPE SIZES, PIPE MATERIALS, AND PIPE INVERTS, PLUS LOCATIONS, DIMENSIONS AND ELEVATIONS OF ALL OTHER CONSTRUCTION COMPONENTS WHICH VARY FROM THE DESIGN. UTILITY INFORMATION SHALL INCLUDE LOCATION OF WATER LINE CONNECTIONS, VALVES, BENDS, METERS AND ELEVATIONS OF PIPES WHERE DEPTH OF COVER VARIES FROM DESIGN; TIES TO SANITARY SEWER LINES, MANHOLE RIM AND INVERT ELEVATIONS, CLEANOUTS AND SERVICE CONNECTIONS; FOUR COPIES OF THE SIGNED AND SEALED RECORD SURVEY AND ONE COPY OF THE SURVEY IN AUTOCAD DIGITAL FORMAT.

### SEWER

1. SHOW ACTUAL ELEVATIONS (TOP AND ALL INVERTS) FOR ALL NEW AND EXISTING MANHOLES.
2. SHOW ACTUAL GRAVITY SEWER SLOPE PERCENTAGES.
3. INDICATE ALL LOCATIONS WHERE SEWER LINE WAS ENCASED OR WHERE DUCTILE IRON WAS UTILIZED.
4. SHOW SIZE, SDR, CLASS OR TYPE OF MATERIAL IF DIFFERENT THAN PLANS.
5. SHOW LOCATIONS OF ALL SERVICE WYNS BY DIMENSION FROM MANHOLES.
6. DIMENSION SERVICE LATERAL TERMINATION POINTS AND DEPTH FROM FINISH GRADE.
7. FITTINGS, VALVES, TAPS, ETC. SHALL BE DIMENSIONED (SEE NOTE NO. 1 UNDER "GENERAL") USING DESCRIPTIVE NOTES INDICATING THEIR EXACT LOCATION.

### PUMP STATIONS

1. SHOW BOTTOM, INFLUENT INVERT AND TOP ELEVATIONS OF WETWELL.
2. ACTUAL ELEVATIONS OF BOTTOM OF CONTROL PANEL.
3. ELEVATIONS OF LIQUID LEVEL SENSORS FOR PUMP OFF, FIRST AND SECOND PUMPS ON (THIRD IF PROVIDED), AND ALARM ON.
4. SHOW ALL WETWELL AND VALVE VAULT PIPING AND VALVE CHANGES.

## GENERAL UTILITY NOTES

1. ALL UTILITY CONSTRUCTION SHALL MEET OR EXCEED PASCO COUNTY STANDARDS AND CONFORM WITH PASCO COUNTY UTILITY DEPARTMENT (PCUD) WATER, RECLAIMED WATER AND WASTEWATER CONSTRUCTION SPECIFICATIONS MANUAL, JULY 2006 EDITION.
2. CONTRACTOR SHALL CONTACT THE PASCO COUNTY UTILITY DEPARTMENT 24 HOURS PRIOR TO EXCAVATION OR CONNECTION TO COUNTY UTILITIES.
3. ALL UNPAVED AREAS DISTURBED BY THIS CONSTRUCTION SHALL BE SODDED UNLESS DIRECTED OTHERWISE BY THE COUNTY UTILITIES DEPT.
4. ALL UTILITY LINES SHALL HAVE AN "EARLY WARNING" PROTECTION TAPE INSTALLED CONTINUOUSLY ALONG THE PIPE ALIGNMENT. IN THE CASE OF GRAVITY SEWERS, THE TAPE SHALL BE SECURED TO EACH MANHOLE. THE PROTECTION TAPE SHALL BE INSTALLED DURING BACK FILING 18" DIRECTLY OVER THE PIPE. THE TAPE SHALL HAVE A METAL DETECTABLE STRIP SANDWICHED BETWEEN 2 LAYERS OF POLYETHYLENE, 2" WIDE STRIPING WITH A THICKNESS OF 5.5 MILS. FOR WATER LINES, THE TAPE SHALL BE CONTINUOUSLY MARKED "CAUTION, WATER LINES BELOW". FOR FORCE MAINS, THE TAPE SHALL BE CONTINUOUSLY MARKED "CAUTION, SEWAGE FORCE MAIN BELOW". FOR SANITARY SEWER, THE TAPE SHALL BE CONTINUOUSLY MARKED "CAUTION, SEWER MAIN BELOW". BOTH WATER MAINS AND SANITARY SEWER FORCE MAINS SHALL ALSO HAVE A "LOCATOR DETECTOR WIRE" - UL TYPE AWG #10 SOLID STRAND COPPER WIRE W/60MM PVC WALL INSTALLED ALONG THE ENTIRE LENGTH OF PIPE.
5. THE CONTRACTOR IS CAUTIONED THAT THE LOCATION OF EXISTING UTILITIES, WHETHER OR NOT SHOWN, ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ACTUAL FIELD LOCATIONS FROM THE RESPECTIVE UTILITY COMPANY AND TO COORDINATE WITH AFFECTED UTILITY COMPANY 48 HOURS BEFORE BEGINNING ANY WORK.

### UTILITY COMPANIES

#### GAS

CLEARWATER GAS  
10555 MOON LAKE ROAD  
NEW PORT RICHEY, FLORIDA 34654  
PH: 727-856-3278 EXT 3014

#### TELEPHONE:

VERIZON NETWORKING SERVICES  
1280 EAST CLEVELAND STREET  
SUITE FLOW-5033  
CLEARWATER, FLORIDA 33755  
(727) 562-1101

#### SUNSHINE STATE ONE CALL 1-800-432-4770

VERIZON (727) 562-1178  
PASCO COUNTY UTILITIES (813)-235-6189

#### SEWER / WATER

PASCO COUNTY PUBLIC UTILITIES  
19420 CENTRAL BOULEVARD  
LAND O' LAKES, FLORIDA 34637  
PH: 813-235-6189

#### FIRE SERVICES

PASCO COUNTY FIRE RESCUE  
4111 LAND O' LAKES BLVD.  
SUITE 208  
LAND O' LAKES, FL 34639

ALL PVC FORCE MAINS, UNLESS SPECIFIED OTHERWISE, SHALL BE AWMA C-909, CLASS 200, AWMA C900, CLASS 150, DR18 PVC WITH AWMA APPROVED DUCTILE IRON MECHANICAL JOINT FITTINGS AND SHALL BE BROWN PIPE (WHITE OR BLACK LETTERING).

ALL PVC WATER MAINS, UNLESS SPECIFIED OTHERWISE, SHALL BE AWMA C-900, DR 18 PVC WITH AWMA APPROVED DUCTILE IRON MECHANICAL JOINT FITTINGS AND SHALL BE BLUE (WHITE OR BLACK LETTERING).

SANITARY SEWER (GRAVITY) PIPE SHALL CONFORM TO ASTM 3034 SDR35 PVC BELL AND SPIGOT GASKETED JOINTS FOR DEPTHS LESS THAN 12'. FOR DEPTHS GREATER THAN 12', ASTM 3034, SDR 26.

ADDITIONAL REQUIREMENTS FOR PVC, DUCTILE IRON AND HDPE PIPING ARE CONTAINED IN THE CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS FOR THIS PROJECT.

ALL PVC PIPE SHALL HAVE LETTERING APPEARING ON THREE SIDES OF THE PIPE, SHALL RUN THE ENTIRE LENGTH OF THE PIPE AND SHALL BE 3/4" IN HEIGHT WITH THE APPROXIMATE WORDING APPEARING ONE OR MORE TIMES EVERY 21 INCHES ALONG THE LENGTH OF THE PIPE. THE LETTERING MUST BE PERMANENTLY STENCILED TO THE PIPE SURFACE. LETTERING SHALL READ AS IS ACCEPTABLE FOR THE INTENDED USE. ALL LETTERING SHALL BE APPLIED BY THE PIPE MFG. DURING PRODUCTION.

THE CONTRACTOR SHALL PERFORM LEAK TESTING LAMPING AND VIDEO TAPING ON ALL GRAVITY SEWERS AND A PRESSURE TEST ON ALL WATER, REUSE AND FORCE MAINS (AS APPLICABLE) IN ACCORDANCE WITH THE UTILITY HAVING JURISDICTION AND/OR AS STATED IN THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER. TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD. THE SCHEDULING, COORDINATION AND NOTIFICATION OF ALL PARTIES IS THE CONTRACTOR'S RESPONSIBILITY.

WATER AND WASTEWATER SYSTEMS SHALL NOT BE PLACED IN SERVICE (FOR TEMPORARY OR PERMANENT USE) UNTIL ALL TESTING AND INSPECTIONS HAVE BEEN COMPLETED, TEST REPORTS AND "AS-BUILTS" FOR THOSE SYSTEMS SUBMITTED, AND CLEARANCE HAS BEEN OBTAINED FROM THE APPLICABLE UTILITIES AND PERMITTING AGENCIES. NO WATER SYSTEM SHALL BE PLACED IN SERVICE BEFORE SEWER SYSTEM HAS BEEN CLEARED FOR USE.

DISINFECTION AND BACTERIOLOGICAL TESTING OF ALL WATER LINES SHALL BE PERFORMED IN ACCORDANCE WITH FDP REGULATION 62-555.340.

DEFLECTION TESTING FOR GRAVITY SEWER LINES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 33.85 OF "RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES (10 STATE STANDARDS)", 1997 EDITION.

TESTING OF SUB AQUEOUS LINES SHALL COMPLY WITH FAC 62-604.400(2).

THE CONTRACTOR SHALL COMPLY WITH LOCAL CROSS-CONNECTION CONTROL POLICY FOR CONSTRUCTION OF ALL POTABLE, SANITARY AND RECLAIMED UTILITIES.

ALL WATER MAINS SHALL HAVE A MINIMUM OF 36" COVER. FORCE MAINS SHALL HAVE A MINIMUM OF 48" COVER. INCREASED DEPTH MAY BE REQUIRED TO AVOID STORM DRAINAGE OR OTHER UTILITY SYSTEMS.

CONTRACTOR TO PROVIDE THRUST BLOCKING AND/OR JOINT RESTRAINTS TO FULLY RESTRAIN PRESSURE PIPES AGAINST FAILURE UP TO A TEST PRESSURE OF 150 psi. CONTRACTOR SHALL PROVIDE A RESTRAINING PLAN FOR THE ENGINEER'S REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

WARNING SIGNS SHALL BE INSTALLED AT ANY SURFACE WATER CROSSING IN ACCORDANCE WITH FAC 62-604.400(2).

ALL UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DOCUMENTS REFERENCED HEREIN. ANY METHODS, PROCEDURES, STANDARDS, EQUIPMENT, OR MATERIALS WHICH ARE NOT COVERED OR SPECIFIED BY THE APPLICABLE PROVISIONS OF PASCO COUNTY UTILITIES DEPARTMENT WATER AND WASTEWATER CONSTRUCTION SPECIFICATIONS MANUAL SHALL BE CONSTRUCTED TO BE IN ACCORDANCE WITH THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND F.D.O.T. UTILITIES ACCOMMODATION GUIDE UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. IN THE CASE OF CONFLICTING SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.

ALL UTILITIES SHALL BE KEPT IN OPERATION EXCEPT WITH THE EXPRESS WRITTEN CONSENT OF THE UTILITY OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE EXISTING UTILITIES. ANY AND ALL DAMAGE TO EXISTING UTILITIES AS A RESULT OF THE CONTRACTOR'S ACTIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

WHERE WATER AND SEWER LINE INSTALLATION ARE IN CONFLICT WITH EXISTING UTILITY POLES, GUY WIRES OR SIMILAR STRUCTURES, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY TO DETERMINE WHETHER THE STRUCTURES WILL REQUIRE RESTRAINT. THE FINAL DECISION AS TO WHETHER RESTRAINT IS REQUIRED WHILE EXCAVATION OCCURS SHALL BE THAT OF THE UTILITY OWNER. THE COST FOR THIS COORDINATION AND RESTRAINT SHALL BE INCLUDED IN THE CONTRACTOR'S OVERALL COSTS.

CONTRACTOR SHALL PROVIDE TEMPORARY CONNECTIONS AS NECESSARY FOR FLUSHING, DECONTAMINATION AND PRESSURE TESTING.

CONTRACTOR SHALL CONTACT THE PASCO COUNTY DEPARTMENT OF PUBLIC WORKS 24 HOURS PRIOR TO THE START OF

## UTILITY SEPARATION NOTES

1. NEW OR RELOCATED, UNDERGROUND WATER MAINS INCLUDED IN THIS PROJECT WILL BE LAID TO PROVIDE A MINIMUM DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER, STORM SEWER, STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER (OR A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY-TYPE SANITARY SEWER IF THE BOTTOM OF THE WATER MAIN WILL BE LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER), A HORIZONTAL DISTANCE OF AT LEAST SIX FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM." [FAC 62-555.314(1); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]

2. NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR PIPELINE SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES ABOVE THE OTHER PIPELINE OR AT LEAST 12 INCHES BELOW THE OTHER PIPELINE; AND NEW OR RELOCATED, UNDERGROUND WATER MAINS THAT ARE INCLUDED IN THIS PROJECT AND THAT WILL CROSS ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORM WATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER WILL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OTHER PIPELINE. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]

3. AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE WILL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THAT ALL WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES WILL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORM WATER FORCE MAINS, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. [FAC 62-555.314(2); EXCEPTIONS ALLOWED UNDER FAC 62-555.314(5)]

NOTE: WHEN IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATIONS AS STIPULATED ABOVE, DEP MAY ALLOW DEVIATION ON A CASE-BY-CASE BASIS IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER. APPROVAL FOR THE DEVIATION MUST BE OBTAINED PRIOR TO CONSTRUCTION.

## INSPECTIONS AND MAINTENANCE OF STORMWATER FACILITIES

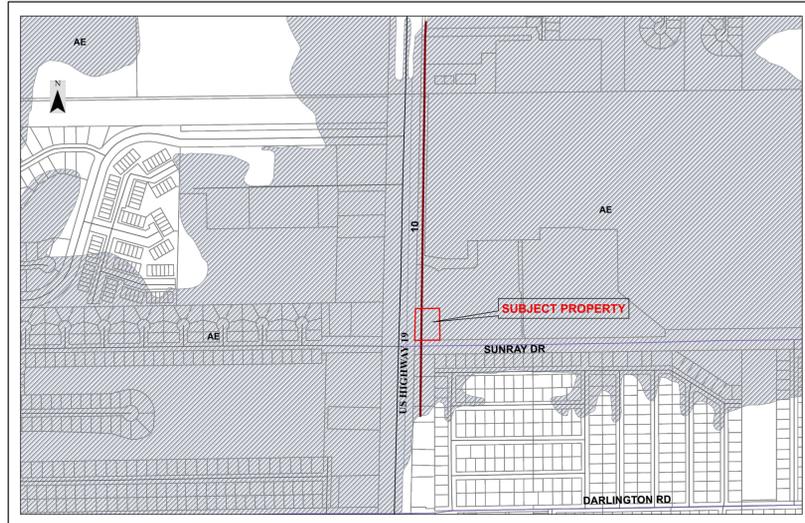
1. EROSION AND SETTLEMENT CONTROLS SHALL BE INSPECTED ON A DAILY BASIS. WHEN NECESSARY REPAIRS SHALL BE INITIATED WITHIN 24 HOURS OF NOTED DEFICIENCY.
2. THE ENTIRE STORM WATER SYSTEM SHOULD BE INSPECTED ON AT LEAST A SEMI-ANNUAL BASIS. THIS SHOULD INCLUDE A VISUAL INSPECTION OF THE POND, POND BANKS, BLEED-DOWN ORIFICES, OTHER CONTROL STRUCTURES, AND DISCHARGE PIPES. THESE SHOULD BE FREE OF DEBRIS AND CLEANED ON A FREQUENCY AS REQUIRED TO KEEP THEM FUNCTIONAL, AS DESIGNED. MOWING/CLEANING AROUND THE STRUCTURES MAY BE REQUIRED TO PREVENT CLOGGING BY VEGETATION.
3. SEDIMENT SUMPS, IF DESIGNED AND INSTALLED, SHOULD HAVE SEDIMENT REMOVED AS NECESSARY TO ALLOW FOR EFFICIENT REMOVAL OF SUSPENDED PARTICLES. THEY SHOULD BE RE-EXCAVATED TO THE DESIGN FINISH GRADE ELEVATION, IF SILED IN.
4. SPECIFIC CONDITIONS OF ALL PERMITS MAY REQUIRE ADDITIONAL MAINTENANCE ACTIVITIES ABOVE AND BEYOND THOSE OUTLINED ABOVE. CHECK ALL PERMIT CONDITIONS AS ISSUED BY REGULATORY AGENCIES TO ENSURE COMPLIANCE.
5. THE REMOVAL OF LITTORAL SHELF VEGETATION (INCLUDING CATTALS) FROM WET DETENTION PONDS IS PROHIBITED UNLESS OTHERWISE APPROVED BY THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWD). REMOVAL INCLUDES DREDGING, THE APPLICATION OF HERBICIDES, CUTTING AND THE INTRODUCTION OF GRASS CARP. ANY QUESTIONS REGARDING AUTHORIZED ACTIVITIES WITH THE WET DETENTION PONDS SHALL BE ADDRESSED TO THE REGULATION MANAGER OF SWFWD'S LOCAL OFFICE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF TEMPORARY SEDIMENT / EROSION CONTROL DEVICES WHEN NO LONGER NEEDED.

## SPECIAL NOTES TO CONTRACTORS

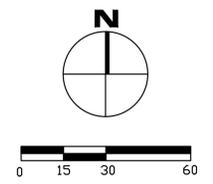
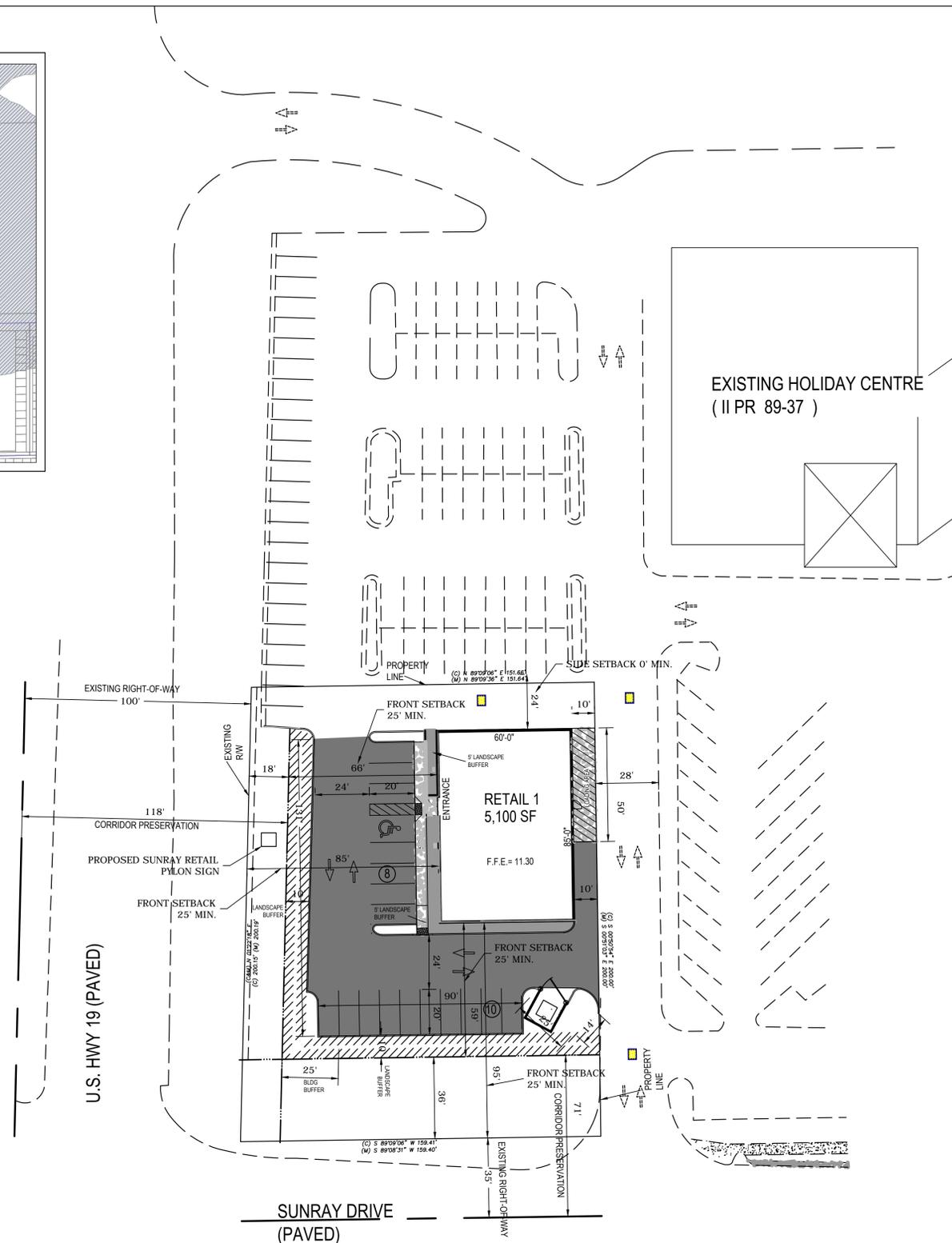
1. WHERE TREE REMOVAL IS REQUIRED DUE TO CONSTRUCTION, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE AND DISPOSE OF THOSE TREES. THE COST FOR THIS REMOVAL AND DISPOSAL SHALL BE INCLUDED IN THE CONTRACTOR'S OVERALL COSTS. TREE REMOVAL AND PROTECTION SHALL COMPLY WITH APPLICABLE CITY AND / OR COUNTY CODES AS APPLICABLE.
2. WHERE WATER AND SEWER LINE INSTALLATION ARE IN CONFLICT WITH EXISTING UTILITY POLES, GUY POLES OR OTHER SUCH POLES, THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY TO DETERMINE WHETHER THE RESPECTIVE POLE REQUIRES RESTRAINT. THE FINAL DECISION AS TO WHETHER A POLE IS TO BE RESTRAINED WHILE EXCAVATION OCCURS AROUND THE POLE SHALL BE THAT OF THE UTILITY OWNER. THE COST FOR THIS COORDINATION AND RESTRAINT SHALL BE INCLUDED IN THE CONTRACTORS OVERALL COSTS.
3. THE CONTRACTOR SHALL SUBMIT MAINTENANCE OF TRAFFIC PLANS TO APPROPRIATE REGULATORY AGENCIES HAVING JURISDICTION OVER IMPACTED ROADWAYS. CONSTRUCTION SHALL NOT COMMENCE WITHIN ROW UNTIL NOT APPROVED. IF IMPACTED ROAD(S) ARE RECEIVED, CONTRACTOR SHALL ALSO NOTIFY LOCAL EMERGENCY SERVICES DEPARTMENTS WHENEVER CONSTRUCTION ACTIVITIES WILL IMPEDE NORMAL TRAFFIC FLOW.
4. ALL DEFLECTION BENDS ARE 45' UNLESS SPECIFIED OTHERWISE. EXACT LOCATION OF BENDS TO BE DETERMINED IN FIELD AND APPROVED BY FIELD INSPECTOR. LOCATION DATA SHALL BE PROVIDED IN AS-BUILTS ACCORDING TO PASCO COUNTY AND/OR FOOT REQUIREMENTS.
5. UNLESS SPECIFIED OTHERWISE, CONTRACTOR SHALL FURNISH AND INSTALL ALL PROPOSED ITEMS SHOWN WITHIN THE CONSTRUCTION PLANS.
6. LENGTHS FOR DIRECTIONAL DRILLING SHOWN ARE MINIMUM TO CLEAR SPECIFIC OBSTRUCTIONS. ADDITIONAL LENGTH MAY BE REQUIRED DEPENDING UPON ALLOWABLE BEND RADIUS, DEPTH AND PIPE DIAMETER. CONTRACTOR SHALL NOTIFY ENGINEER WHENEVER ADDITIONAL DRILL LENGTHS ARE NECESSARY. PIPE DIMENSION RATIO SPECIFIED IS MINIMUM FOR PRESSURE REQUIREMENTS AND MAY NOT BE SUITABLE FOR ALL DEPTH OR LOADING CONDITIONS. DRILLING CONTRACTOR SHALL NOTIFY ENGINEER WHENEVER SPECIFIED MINIMUMS MAY BE UNSUITABLE FOR THE INTENDED APPLICATION.
7. CONSTRUCTION EQUIPMENT AND MATERIAL TRANSPORT / STAGING IS THE RESPONSIBILITY OF THE CONTRACTOR. UPON REQUEST, THE OWNER WILL PROVIDE ACCESS TO THE CLOSEST OPEN SPACE OWNED AND AVAILABLE FOR THE CONTRACTOR'S USE; HOWEVER, THE SITE MAY NOT BE CONTIGUOUS TO THE PROJECT AREA OR OF SUFFICIENT SIZE TO ACCOMMODATE THE ENTIRE PROJECT INVENTORY OF MATERIALS / EQUIPMENT.

## FIRE PROTECTION NOTES:

1. PROJECT MUST COMPLY WITH PASCO COUNTY FIRE HYDRANT ORDINANCE NO. 46-51.
2. FIRE HYDRANTS SHALL BE INSTALLED AND IN SERVICE PRIOR TO THE ACCUMULATION OF COMBUSTIBLES.
3. PER THE NATIONAL FIRE PROTECTION ASSOCIATION. NFPA-1, 16.4.3.1.3: WHERE UNDERGROUND WATER MAINS AND HYDRANTS ARE TO BE PROVIDED, THEY SHALL BE INSTALLED, COMPLETED AND IN SERVICE PRIOR TO CONSTRUCTION WORK.
4. PER NFPA-1, 18.3.4.1 : CLEARANCES OF



FEMA FIRM MAP



LEGEND

- UTILITY ESMT. LINE
- 25' BUFFER LINE
- LANDSCAPE ESMT. LINE
- DRAINAGE ESMT. LINE
- RIGHT-OF-WAY LINE
- LOT LINE/ PROPERTY LINE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED TOP OF CURB ELEV. / PROPOSED EDGE OF PAVEMENT ELEV.
- LIGHT DUTY ASPHALT PAVEMENT (PROPOSED)
- CONCRETE PAD

DENSITY INTENSITY CALCULATIONS:

WETLANDS	0.00 AC
WATER BODIES	0.00 AC
CONSERVATION FLU	0.00 AC
DEVELOPABLE ACREAGE	0.73 AC
<b>TOTAL</b>	<b>= 0.73 AC</b>

SUBJECT PROPERTY LIES WITHIN FLOOD ZONE AE WITH A BASE FLOOD ELEVATION OF 10.0 FT. NAVD AS SHOWN ON THE FLOOD INSURANCE RATE MAP (FIRM) 12101C0353F, EFFECTIVE SEPTEMBER 26, 2014.

**PRELIMINARY SITE PLAN**  
 SUNRAY RETAIL  
 PASCO COUNTY, FLORIDA

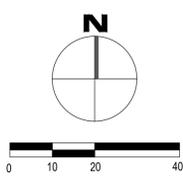
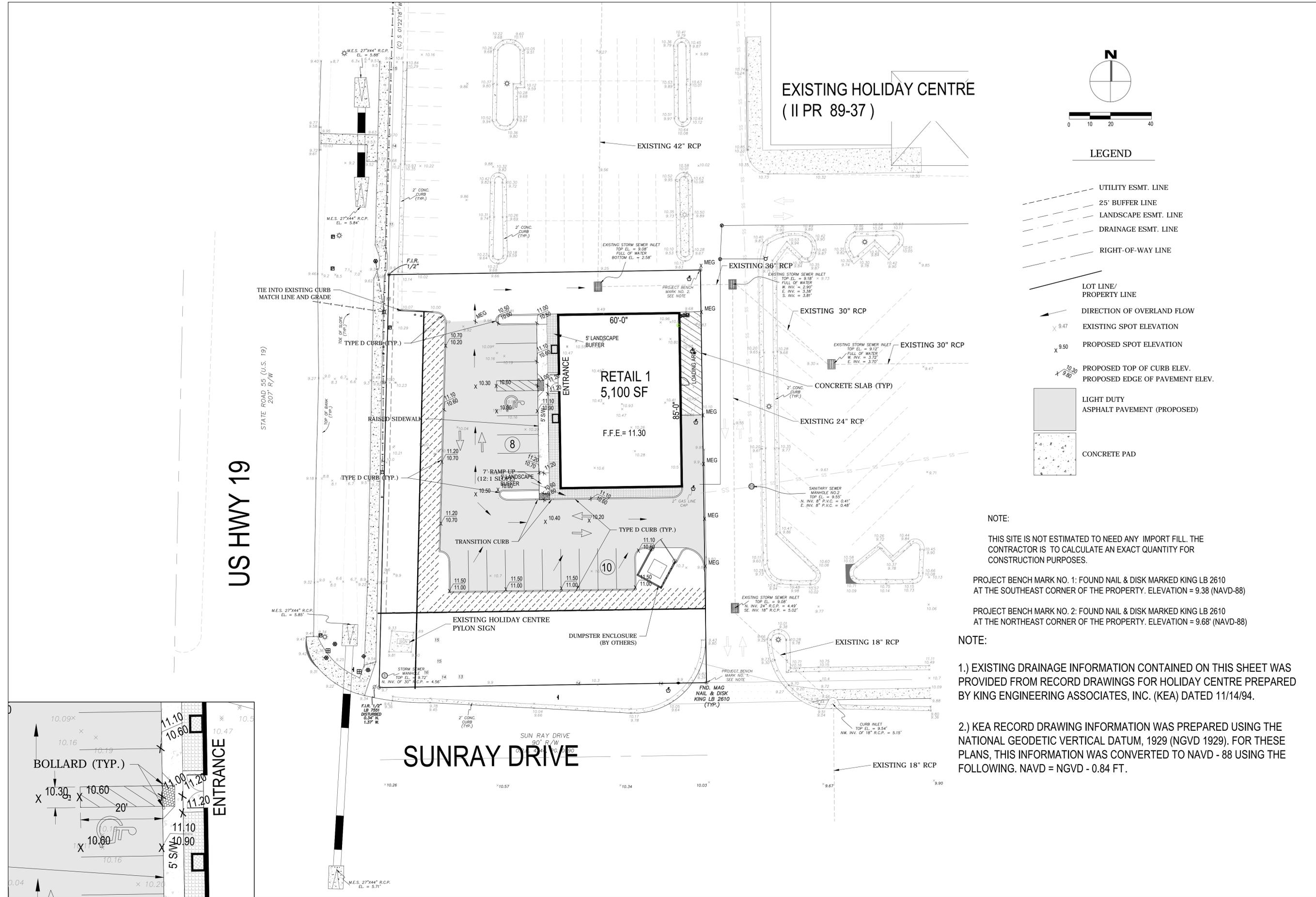
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 727-325-1155 FAX 727-375-1156  
 CERTIFICATE OF AUTHORIZATION NO. 28366

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REVISION	REV. NO.	REV. BY	REV. DATE

SHEET  
**6**



**LEGEND**

- UTILITY ESMT. LINE
- 25' BUFFER LINE
- LANDSCAPE ESMT. LINE
- DRAINAGE ESMT. LINE
- RIGHT-OF-WAY LINE
- LOT LINE/ PROPERTY LINE
- DIRECTION OF OVERLAND FLOW
- x 9.47 EXISTING SPOT ELEVATION
- x 9.50 PROPOSED SPOT ELEVATION
- x 10.30 PROPOSED TOP OF CURB ELEV.  
x 9.90 PROPOSED EDGE OF PAVEMENT ELEV.
- LIGHT DUTY ASPHALT PAVEMENT (PROPOSED)
- CONCRETE PAD

**NOTE:**

THIS SITE IS NOT ESTIMATED TO NEED ANY IMPORT FILL. THE CONTRACTOR IS TO CALCULATE AN EXACT QUANTITY FOR CONSTRUCTION PURPOSES.

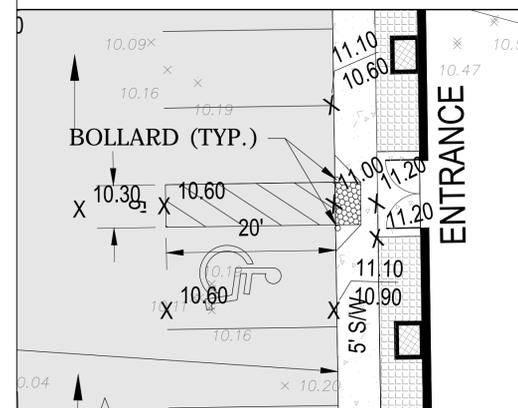
PROJECT BENCH MARK NO. 1: FOUND NAIL & DISK MARKED KING LB 2610 AT THE SOUTHEAST CORNER OF THE PROPERTY. ELEVATION = 9.38 (NAVD-88)

PROJECT BENCH MARK NO. 2: FOUND NAIL & DISK MARKED KING LB 2610 AT THE NORTHEAST CORNER OF THE PROPERTY. ELEVATION = 9.68 (NAVD-88)

**NOTE:**

1.) EXISTING DRAINAGE INFORMATION CONTAINED ON THIS SHEET WAS PROVIDED FROM RECORD DRAWINGS FOR HOLIDAY CENTRE PREPARED BY KING ENGINEERING ASSOCIATES, INC. (KEA) DATED 11/14/94.

2.) KEA RECORD DRAWING INFORMATION WAS PREPARED USING THE NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929). FOR THESE PLANS, THIS INFORMATION WAS CONVERTED TO NAVD - 88 USING THE FOLLOWING. NAVD = NGVD - 0.84 FT.



PAVING GRADING & DRAINAGE PLAN

SUNRAY RETAIL  
PASCO COUNTY, FLORIDA

DRAWING INVAID UNLESS SIGNED, DATED & SEALED BY REGISTERED PROFESSIONAL

JAMIE P. GRADY, P.E. # 59332

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Design & Engineering, Inc.

9400 RIVER CROSSING BUSINESS SUITE 104 NEW PORT RICHEY, FLORIDA 34655  
727-335-1155 EXT 411 FAX 727-751-1156  
CERTIFICATE OF AUTHORIZATION NO. 25366

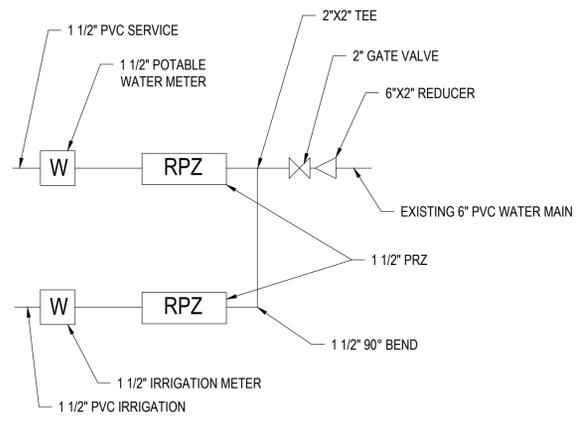
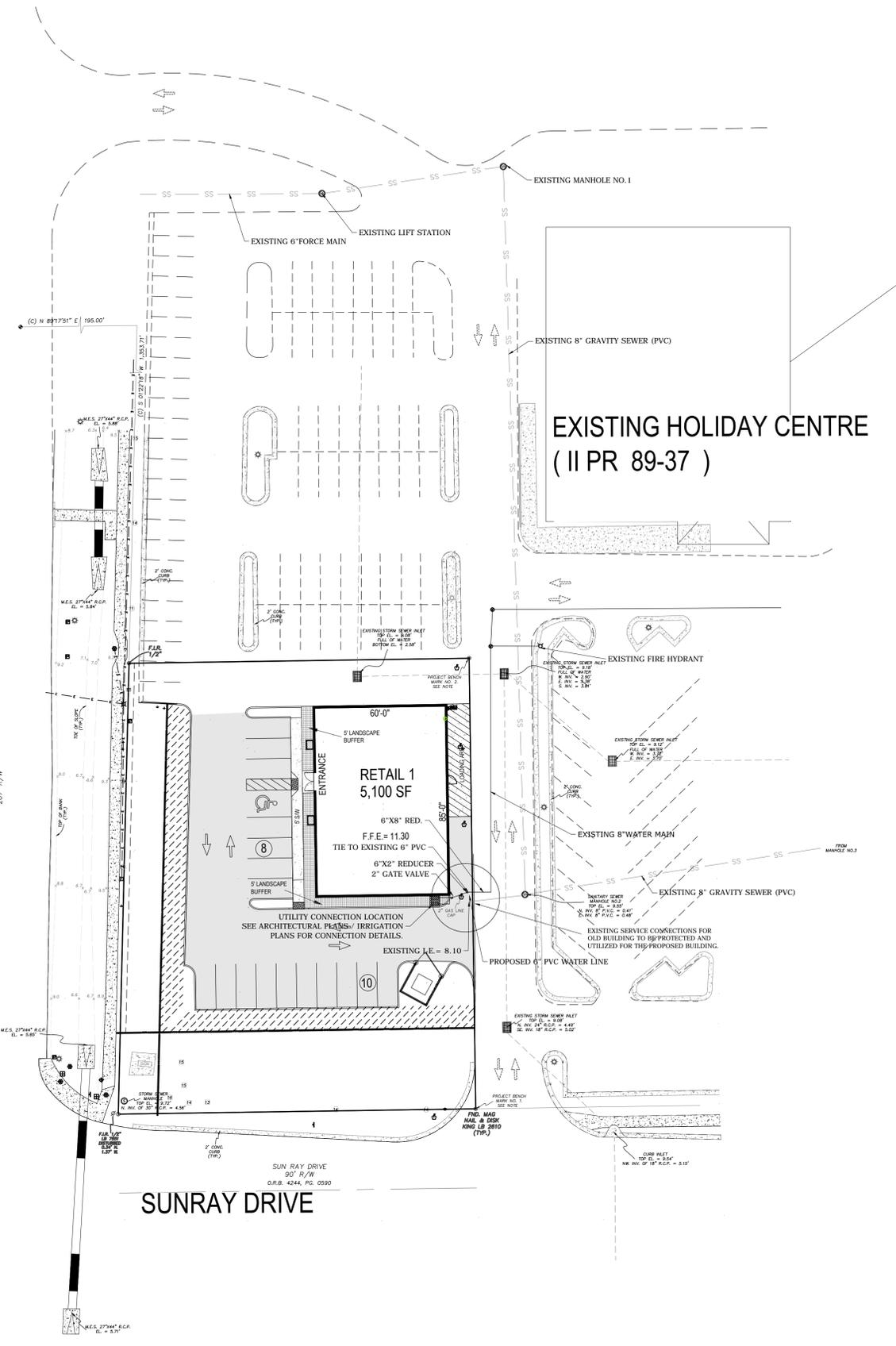
REVISION	REV. NO.	REV. BY	DATE

SHEET

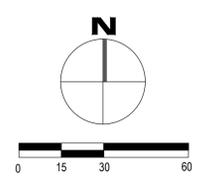
7

US HWY 19

STATE ROAD 55 (U.S. 19)  
2000 R/W



SERVICE CONNECTION DETAIL



LEGEND

- UTILITY ESMT. LINE
- 25' BUFFER LINE
- LANDSCAPE ESMT. LINE
- DRAINAGE ESMT. LINE
- RIGHT-OF-WAY LINE
- LOT LINE/ PROPERTY LINE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- PROPOSED TOP OF CURB ELEV.  
PROPOSED EDGE OF PAVEMENT ELEV.
- LIGHT DUTY ASPHALT PAVEMENT (PROPOSED)
- CONCRETE PAD

NOTE:

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UTILITY SERVICE PLAN

SUNRAY RETAIL  
PASCO COUNTY, FLORIDA

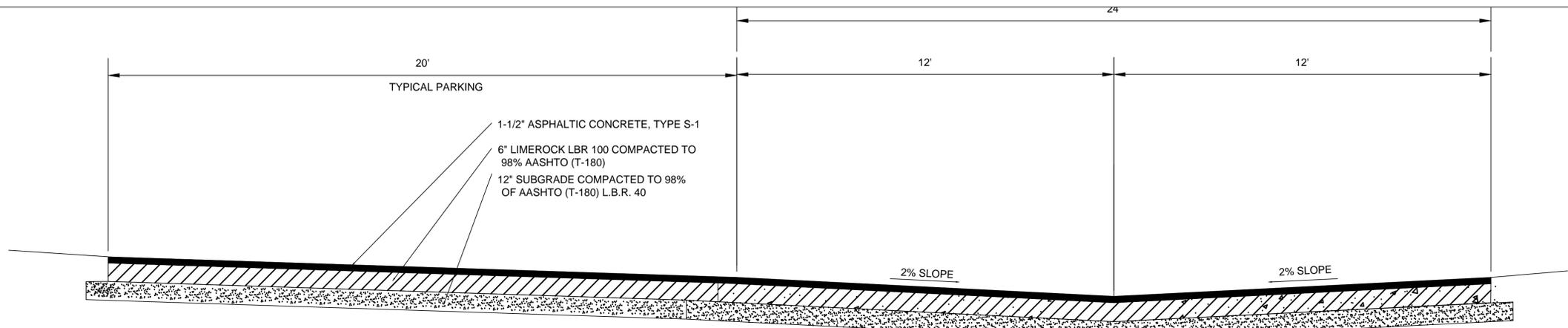
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SHEET  
**8**

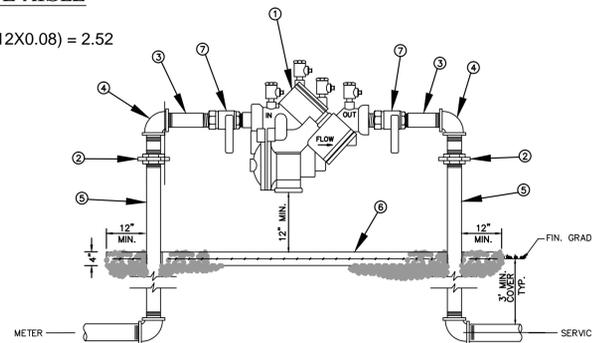


**LIGHT DUTY ASPHALT PAVEMENT**

**PARKING LOT & DRIVE AISLE**

N.T.S.

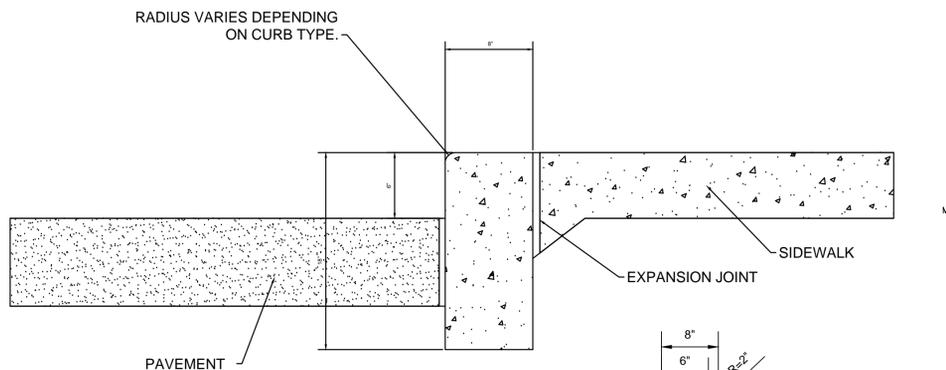
S.N. = (1.5X0.44) + (6X0.15) + (12X0.08) = 2.52



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	BACKFLOW PREVENTER ASSEMBLY, REDUCED PRESSURE ZONE
2	2	UNIONS - GALV.
3	2	NIPPLES - BRASS
4	2	ELBOWS - GALV. 90°
5	2	RISER - GALV.
6	*	CONCRETE SLAB
7	2	BALL VALVES - BRASS OR S.S. (PROVIDED WITH BFP ASS'Y)

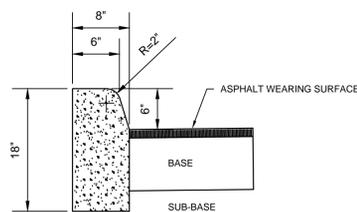
NOTE: - FIELD ADJUST AND CUT ITEM 5 TO THE PROPER LENGTH.  
 - MINIMUM CLEARANCE OF 24" TO BE MAINTAINED AROUND DEVICE FOR TESTING.  
 - ENTIRE ASSEMBLY TO BE PAINTED SAFETY BLUE.  
 - CONCRETE SLAB TO EXTEND 12" MIN. AROUND ENTIRE DEVICE.  
 - DEVICE MUST BE LISTED WITH THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.

**REDUCED PRESSURE BACKFLOW PREVENTER (SINGLE SERVICE: 3/4", 1", 1-1/2", 2") PASCO COUNTY UTILITIES**



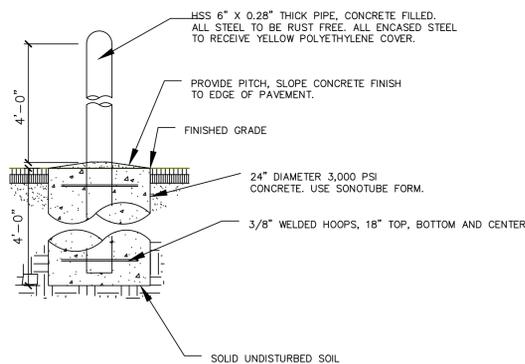
**NOTES:**

- SEE CONC. SIDEWALK / SLAB DETAIL FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.
- USE 1/2" EXPANSION JOINT AND SEALER WHEN PAVEMENT IS CONCRETE.
- AT CURB-SIDEWALK LINE USE CONTROL JOINT FOR MONOLITHIC POUR OR EXPANSION JOINT OTHERWISE.
- SIDE WALK SHALL SLOPE AWAY FROM BUILDING @ +/- 1.0%

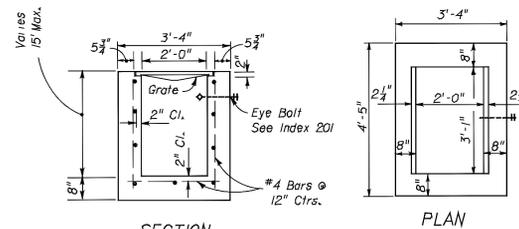


**TYPE "D" CURB PER FDOT INDEX NO. 300**

**RAISED SIDEWALK DETAIL**



**TYPICAL PIPE BOLLARD**

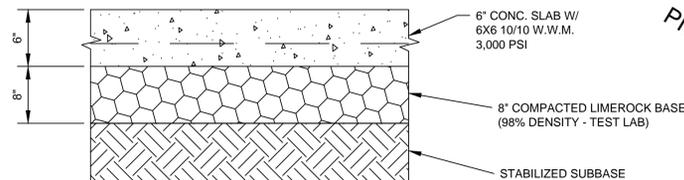


**TYPE C INLET WITH CAST IRON GRATE**

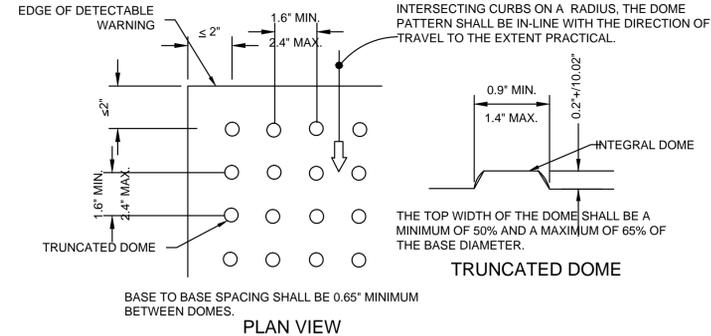
Recommended Maximum Pipe Size:  
 2'-0" Wall-18" Pipe  
 3'-1" Wall-24" Pipe

NOTICE: Steel Grates Are Required On Inlets With Traversable Slots And On Inlets where Bicycle Traffic Is Anticipated.

N.T.S.



**CONCRETE SLAB DETAIL**



**CURB RAMP DETECTABLE WARNING DETAIL**

ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES (610 MM) FROM THE BACK OF CURB.

**SITE DETAILS**

SUNRAY RETAIL  
 PASCO COUNTY, FLORIDA

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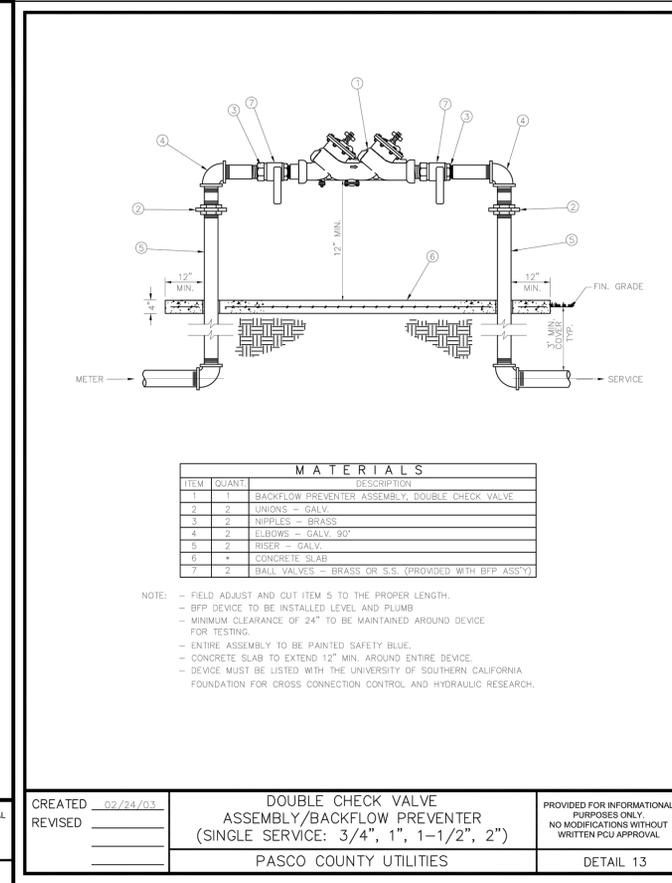
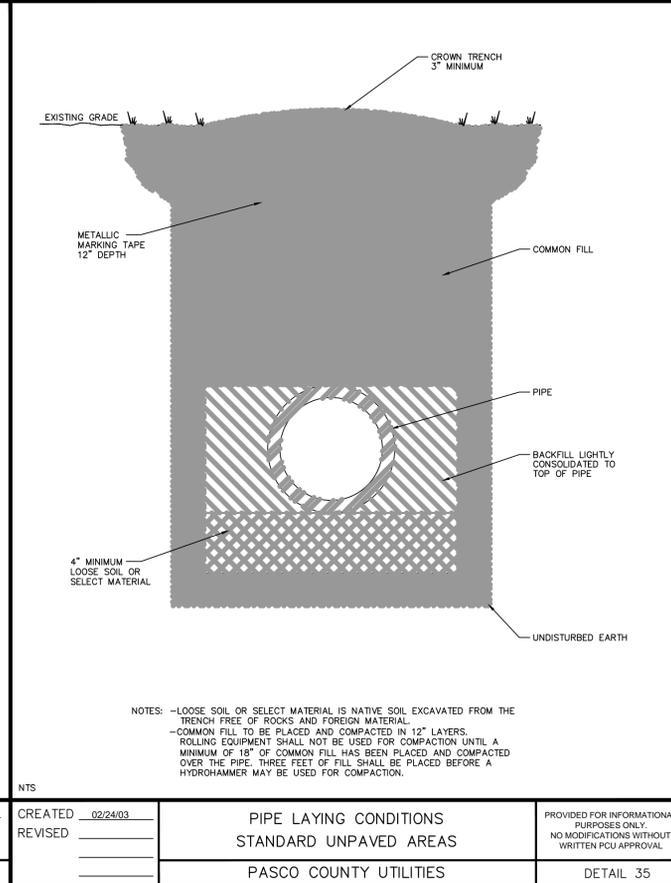
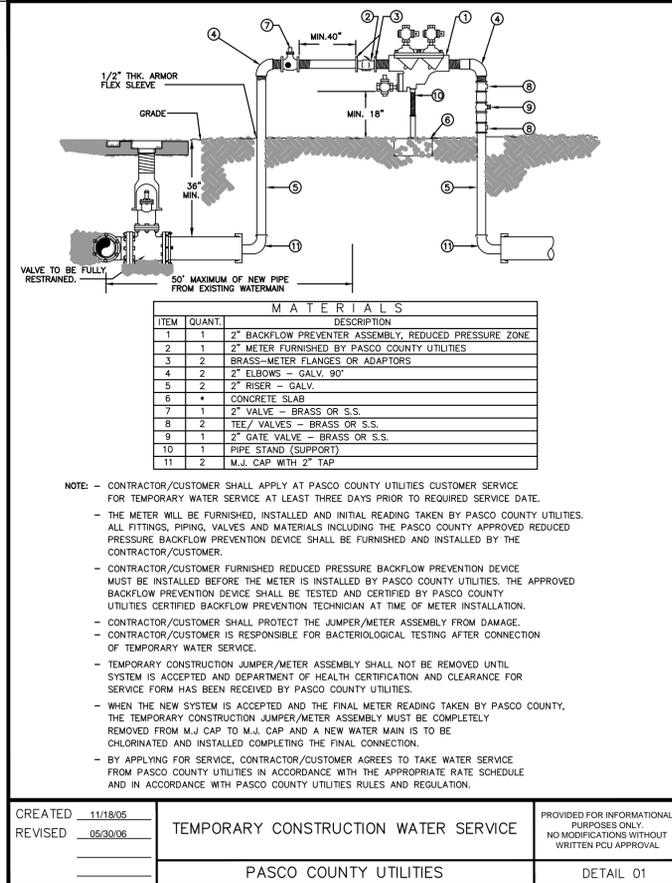
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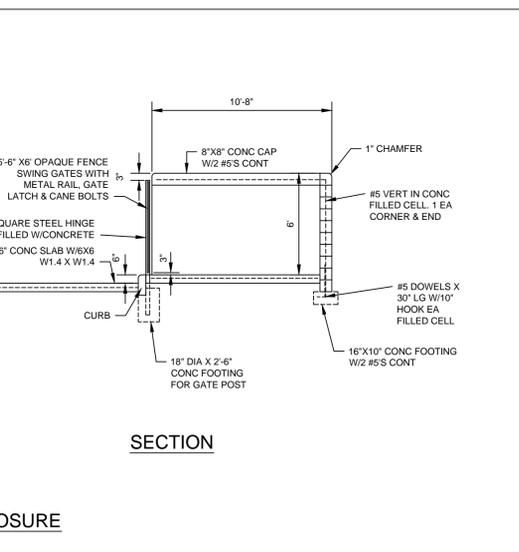
**SHEET**

**9**



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REVISED	05/30/06		REVISED		
TEMPORARY CONSTRUCTION WATER SERVICE			PIPE LAYING CONDITIONS		
PASCO COUNTY UTILITIES			STANDARD UNPAVED AREAS		
DETAIL 01			DETAIL 35		

CREATED	02/24/03	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED		
DOUBLE CHECK VALVE ASSEMBLY/BACKFLOW PREVENTER (SINGLE SERVICE: 3/4", 1", 1-1/2", 2")		
PASCO COUNTY UTILITIES		
DETAIL 13		



SITE DETAILS

SUNRAY RETAIL  
PASCO COUNTY, FLORIDA

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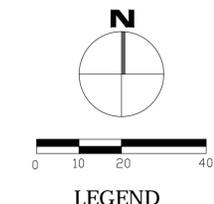
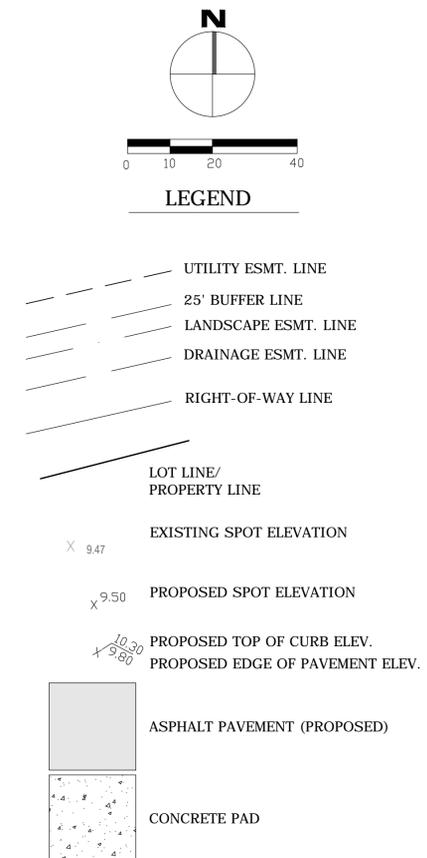
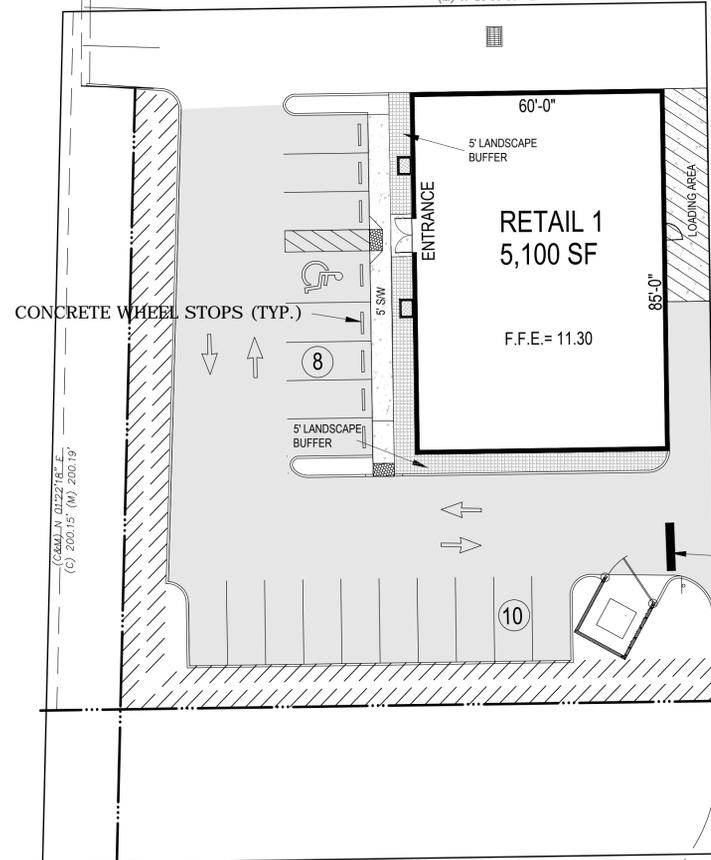
DATE	REV. BY	REV. NO.	REVISION

SHEET

10

US HWY 19

SUNRAY DRIVE



**SIGN LEGEND**

NO.	TEXT OR SYMBOL	SIZE	QUANTITY
R1-1	STOP	30X30	1

ALL SIGNS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

**STRIPING NOTES**

1. TYPICAL PARKING SPACES SHALL BE STRIPED WITH A 4" WIDE WHITE STRIPE.
2. SEE DETAILS PER HANDICAP PARKING FOR STRIPING DETAILS.

**SIGN PLAN & DETAILS**  
 SUNRAY RETAIL  
 PASCO COUNTY, FLORIDA

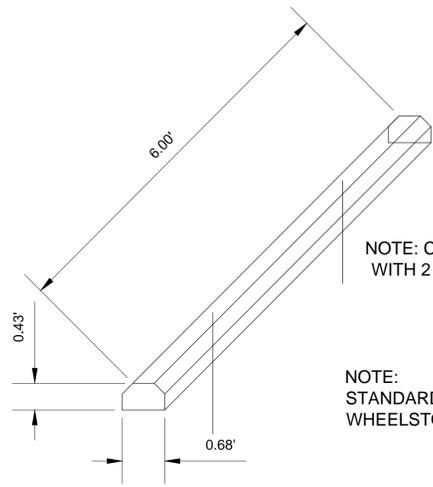
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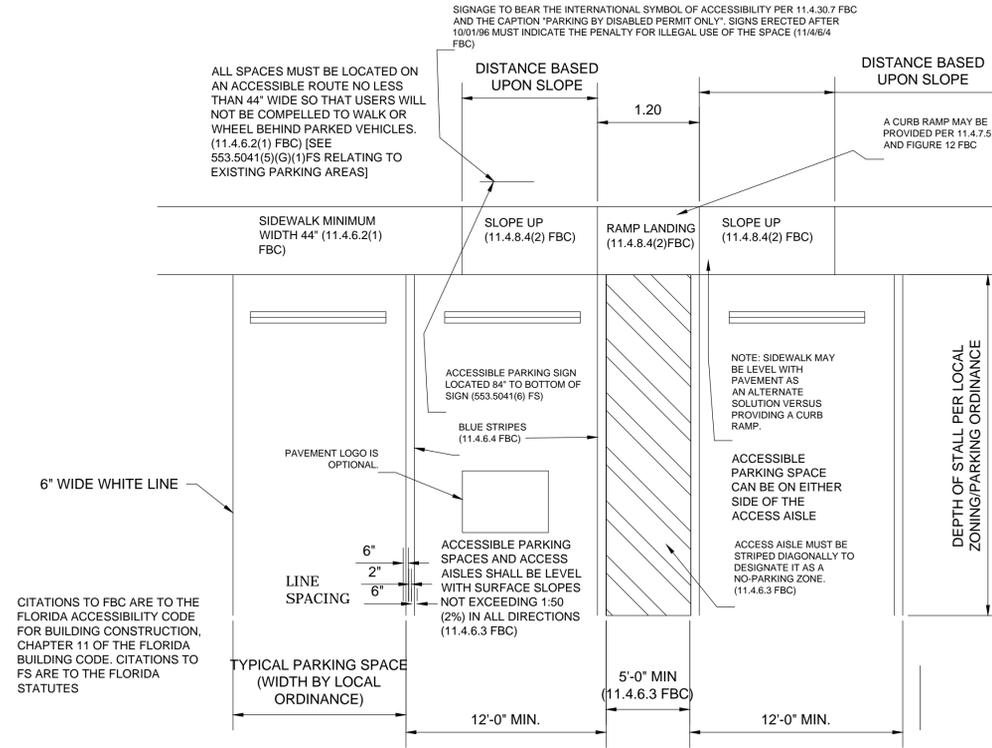
SHEET  
 11



NOTE: CAR STOP TO BE PINNED IN PLACE WITH 2 1/2"X12" STEEL PINS.

NOTE: STANDARD PLACEMENT 30" FROM BACK OF WHEELSTOP TO EOP.

CONCRETE WHEEL STOP



CITATIONS TO FBC ARE TO THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, CHAPTER 11 OF THE FLORIDA BUILDING CODE. CITATIONS TO FS ARE TO THE FLORIDA STATUTES

THIS TECHNICAL ASSISTANCE DOCUMENT IS INTENDED TO PROVIDE INFORMAL GUIDANCE AND DOES NOT CONSTITUTE A LEGAL INTERPRETATION OF STATUTORY OR REGULATORY CRITERIA

RECOMMENDED ACCESSIBLE PARKING SPACE(S) DESIGN FOR SINGLE LINE REQUIREMENTS

- NOTES:
1. TOP PORTION OF FTP 25 & 26 SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
  2. BOTTOM PORTION SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
  3. FTP 25 & 26 MAY BE FABRICATED ON ONE PANEL OR TWO.
  4. FTP 25 MAY BE SUBSTITUTED FOR THE FTP 26 IN AREAS WHERE SPACE IS LIMITED.
  5. SIGNS ARE TO BE MOUNTED AT STANDARD HEIGHT. (7. FROM PAVEMENT TO BOTTOM OF SIGN).
  6. A SIGN IDENTIFYING THE PROVIDED HANDICAP SPACE AS VAN ACCESSIBLE IS REQUIRED FOR THE PROPOSED HANDICAP PARKING SPACE.



W11-2



W16-7P



W16-9

STRIPING & SIGNING  
DETAILS

SUNRAY RETAIL  
PASCO COUNTY, FLORIDA

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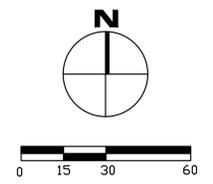
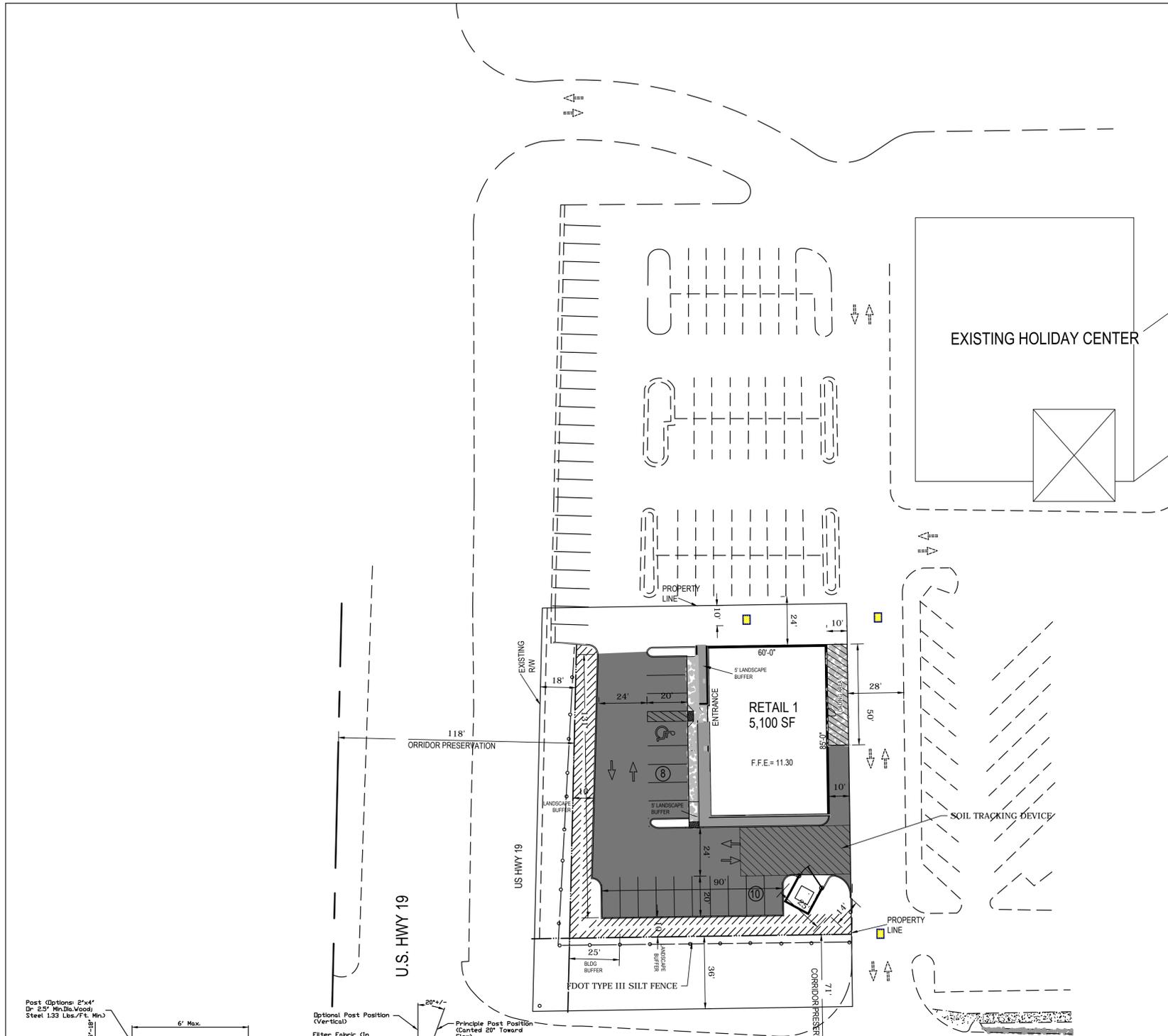
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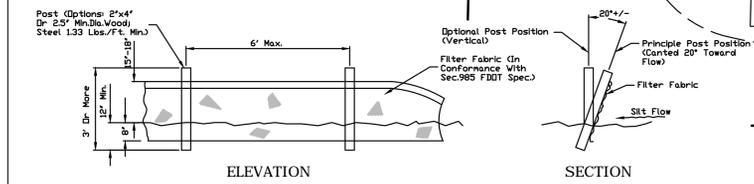
SHEET

12



**LEGEND**

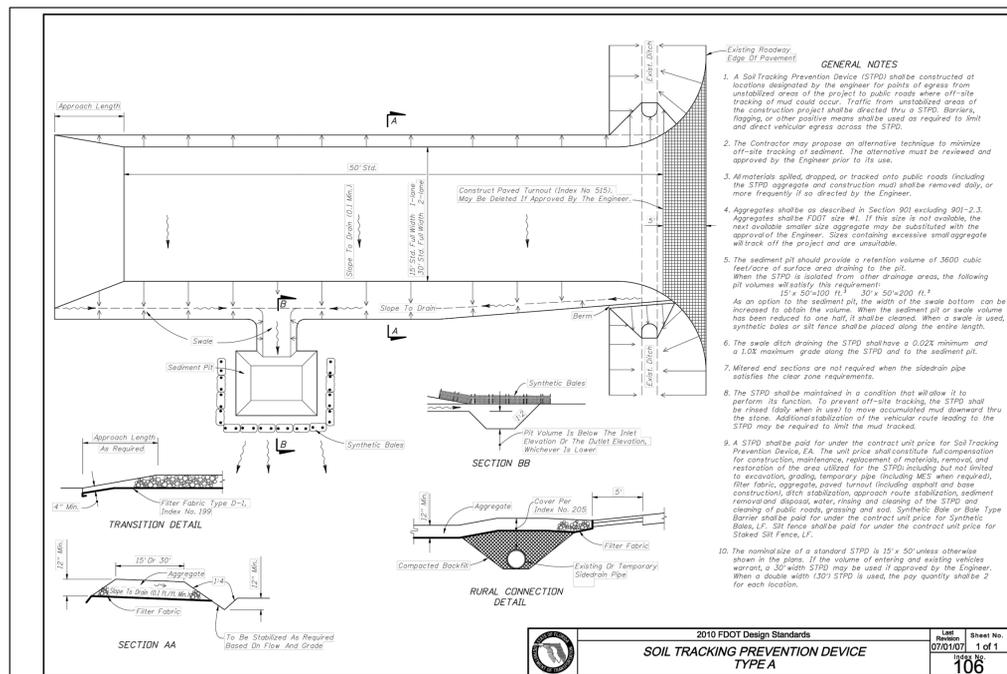
- UTILITY ESMT. LINE
- 25' BUFFER LINE
- LANDSCAPE ESMT. LINE
- DRAINAGE ESMT. LINE
- RIGHT-OF-WAY LINE
- LOT LINE/ PROPERTY LINE
- FDOT TYPE II SILT FENCE
- ASPHALT PAVEMENT



**TYPE III SILT FENCE**

**NOTES:**  
 -For Additional Information And Details, See F.D.O.T. Index No. 102.  
 -Unless Specified, Hay Barriers May Be Used In Lieu Of Silt Fences.  
 -Additional Posts And Rails May Be Necessary To Secure And Support Barriers.  
 -Additional Fence Lengths May Be Required By The County Engineer Or By Regulatory Agencies.

Do Not Deploy In A Manner That Silt Fences Will Act As A Dam Across Permanent Flowing Watercourses. Silt Fences Are To Be Used At Upland Locations.



- GENERAL NOTES**
1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.
  2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.
  3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction materials) shall be removed daily, or more frequently if so directed by the Engineer.
  4. Aggregate shall be as described in Section 901 excluding 901-2.3. Aggregate shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive fine aggregate will track off the project and are unsuitable.
  5. The sediment pit shall provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit. When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:  
 15' x 50' x 100' ft.  
 30' x 50' x 200' ft.  
 As an option to the sediment pit, the width of the waste bottom can be increased to obtain the volume. When the sediment pit or waste volume has been reduced to one half, it shall be cleaned. When a waste is used, synthetic bales or silt fence shall be placed along the entire length.
  6. The waste ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.
  7. Mitered end sections are not required when the side drain pipe satisfies the clear zone requirements.
  8. The STPD shall be maintained in a condition that allows it to perform its function. To prevent off-site tracking, the STPD shall be cleaned daily when in use to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit mud tracking.
  9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD including but not limited to excavation, grading, temporary pipe including MES when required, filter fabric, aggregate, power turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water rinsing and cleaning of the STPD and clearing of public roads, grassing and seed. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt Fence shall be paid for under the contract unit price for Staked Silt Fence, LF.
  10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and exiting vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2' for each location.

2010 FDOT Design Standards  
**SOIL TRACKING PREVENTION DEVICE TYPE A**  
 SHEET NO. 106 OF 1

**SWPPP PLAN**  
 SUNRAY RETAIL  
 PASCO COUNTY, FLORIDA

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**SHEET**  
**13**

**Pasco County Landscaping Standard Notes (Pasco LDC 905.2)**

- Maintenance Responsibility.** The County is not responsible for maintenance of any landscaping unless approved through a County maintenance agreement. (LDC 905.2-C.1.a)
- Clear-Sight Triangle.** Where a driveway/accessway intersects a road right-of-way or where two (2) road rights-of-way intersect, vegetation, structures, and non-vegetative visual screens shall not be located so as to interfere with the clear sight triangle as defined in this Code or the Florida Department of Transportation, Manual of Uniform Minimum Standards, most recent edition (Green Book), whichever is more restrictive. (LDC 905.2-C.1.b)
- Sustainable Practices.** Landscaping shall be installed so that landscaping materials meet the concept of right material/right place. Installed trees and plants shall be grouped into zones according to water, soil, climate, and light requirements. Plant groupings based on water requirements are drought tolerant, natural, and oasis. (LDC 905.2-C.1.c)
- Diversity.** A maximum of 50 percent of the plant materials used, other than trees, may be non-drought tolerant. A minimum of 30 percent of the plant materials, other than trees and turf grass, used to fulfill the requirements of this subsection shall be native Floridian species, suitable for growth in the county. (LDC 905.2-C.1.d)
- Diversity.** No one plant species of shrubs or ground cover plants, excluding turf grass, shall constitute more than 25 percent coverage of the overall landscape area. (LDC 905.2-C.1.d.5)
- Quality.** All plant materials shall be Florida No. 1 grade per "Grades and Standards for Nursery Plants," Florida Department of Agriculture and Consumer Services (FDACS), which is incorporated herein by reference. (LDC 905.2-C.2.a)
- Avoid Easements.** Trees shall not be planted within any easement so as to interfere with the use of that easement, nor under any present or planned overhead utility, nor in any rights-of-way without County approval through the associated review process. (LDC 905.2-C.3.c)
- Mulch.** Mulch shall be used in conjunction with living plant materials so as to cover exposed soil. Mulch shall be installed to a minimum depth of three (3) inches. The mulch should not be placed directly against the plant stem or tree trunk. Mulch shall not be required for annual beds. Stone or gravel may be used to cover a maximum of 20 percent of the landscaped area. (LDC 905.2-C.3.d)
- Quality Practices.** All landscaping shall be installed in accordance with standards and practices of the Florida Nursery, Growers, and Landscape Association and the Florida Chapter of the International Society of Arboriculture. (LDC 905.2-C.3.e)
- Planting Schedule.** All portions of a lot upon which development has commenced, but not continued for a period of 30 days, shall be planted with a grass species or ground cover to prevent erosion and encourage soil stabilization. Adequate coverage, so as to suppress fugitive dust, shall be achieved within 45 days. (LDC 905.2-C.3.g)
- Maintenance.** All required landscaping shall be maintained in a healthy condition in perpetuity in accordance with this Code. (LDC 905.2-E.2)
- Ongoing maintenance.** Ongoing maintenance to prevent the establishment of prohibited exotic species is required. (LDC 905.2-E.4)

**Irrigation Note:**  
See Sheet IRI for Irrigation Plan. Irrigation shall be provided by automatic, underground irrigation system meeting Pasco County irrigation requirements and providing 100% coverage to proposed landscape materials.

**Landscape Maintenance Note:**  
The Contractor will be responsible for maintenance of landscaping during construction until acceptance by the owner. When construction is complete and approved by the County, the Property Owner will be responsible for maintenance of the landscaping.

**PASCO COUNTY GENERAL REQUIREMENTS**

NO EXISTING TREE REMOVAL WITHIN PROJECT LIMITS – NO TREE REPLACEMENT REQUIRED.  
10 TREES PROVIDED – 2 MINIMUM SPECIES REQUIRED  
BUILDING FOUNDATION – 4 SPECIES PROVIDED  
BUILDING FOUNDATION – 2 TREES (3 palms = 1 tree)

**50% SHRUBS/GROUNDCOVERS REQUIRED TO BE DROUGHT TOLERANT**  
70.1% OF SHRUBS/GROUNDCOVERS PROVIDED ARE DROUGHT TOLERANT

**30% SHRUBS/GROUNDCOVERS REQUIRED TO BE NATIVE**  
30.6% SHRUBS/GROUNDCOVERS PROVIDED ARE NATIVE

**25% MAXIMUM COVERAGE OF ANY ONE SHRUB/GROUNDCOVER SPECIES**  
(PROJECT SITE 0.71 ACRES, PER 905.2.C.1.d.(6) EXEMPT THIS REQUIREMENT)

**BUILDING PERIMETER LANDSCAPE**  
**BUILDING**  
50% OF BUILDING PERIMETER REQUIRED TO BE LANDSCAPED (145 LF)  
50% OF BUILDING PERIMETER PROVIDED IS LANDSCAPED (145 LF)

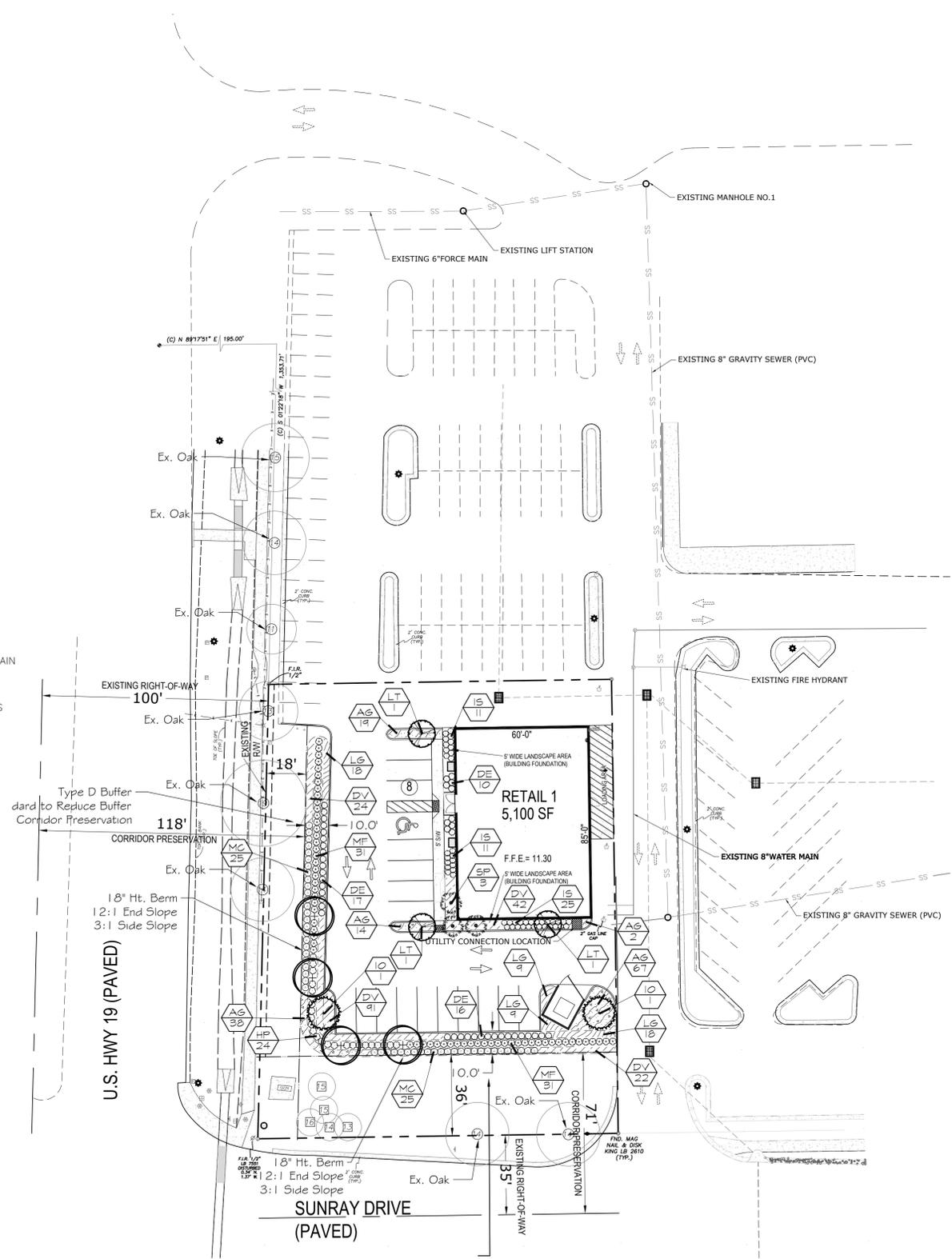
10% OF BUILDING AREA REQUIRED TO BE WITHIN BUILDING PERIMETER LANDSCAPING  
BUILDING AREA = 5,100 SF X 10% = 510 SF REQUIRED BUILDING PERIMETER LANDSCAPE AREA 619.48 SF (12.1%) PROVIDED OF BUILDING PERIMETER LANDSCAPE AREA.

**GROUNDCOVER PLANT NOTE**  
GROUNDCOVER PLANTS SHALL BE SPACED TO PRESENT A FINISHED APPEARANCE AND OBTAIN A REASONABLY COMPLETE COVERAGE WITHIN ONE (1) YEAR.

**PLANT MATERIAL REPLACEMENT NOTE**  
ANY PLANT MATERIALS OF WHATSOEVER TYPE AND KIND REQUIRED BY THESE REGULATIONS SHALL BE REPLACED WITHIN THIRTY (30) DAYS OF THEIR DEMISE AND/OR REMOVAL.

**PLANT SCHEDULE**

TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	REMARKS
BN	4	Betula nigra	River Birch	-	3"Cal	8'-10" Ht., 3'-4" Sp.	Native, Multi-trunk 3-4 Trunks Only
IO	2	Ilex opaca 'East Palatka'	American Holly	-	2"Cal	8'-10" Ht., 3'-4" Sp.	Native, Drought Tolerant
LT	3	Lagerstroemia indica 'Tuskegee'	Tuskegee Crape Myrtle	-	3"Cal	8'-10" Ht., 3'-4" Sp.	Drought Tolerant, Multi-trunk 3-4 trunks only
SP	3	Sabal palmetto	Sabal Palm	-		12'-15' CT, Varied Ht.	Native, Drought Tolerant
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS		
DE	43	Duranta erecta 'Gold Mound'	Gold Mound Duranta	3 gal., 20" Ht. x 20" Sp.	Drought Tolerant		
HP	24	Hamelia patens 'compacta'	Dwf. Fire Bush	3 gal., 20" x 20"	Native, Drought Tolerant		
IS	47	Ilex vomitoria Schellings Dwarf	Schellings Yaupon Holly	3 gal., 14" Ht. x 14" Sp.	Native, Drought Tolerant		
MC	50	Muhlenbergia capillans	Pink Muhly Grass	3 gal., 20" Ht. x 20" Sp.	Native, Drought Tolerant		
MF	62	Myrcianthes fragrans	Simpson's Stopper	3 Gal., 24" Ht. x 24" Spr.	Native, Drought Tolerant		
GROUNDCOVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS	
AG	140	Arachis glabrata-Rhizoma	Perennial Peanut Grand Reserve	12"x18", 1 gal.	24" o.c.	Drought Tolerant, Rode Groundcovers	
DV	179	Dietes vegeta	African Iris	12"x18", 1 gal.	24" o.c.		
LG	54	Linope muscan 'Emerald goddess'	Emerald Goddess Linope	12"x18", 1 gal.	24" o.c.	Drought Tolerant, Rode Groundcovers	



ENGINEERING & LAND PLANNING  
BASE INFORMATION PROVIDED BY:  
**Regency Design & Engineering, Inc.**  
9400 River Crossing Blvd., Suite 104  
New Port Richey, Florida 34655  
Phone - (727) 375-1155

**ROBERSON RESOURCE GROUP**  
Landscape Architecture & Consulting

3152 Little Road, # 125, Trinity, Florida 34685  
Phone: 727-256-4256 Web: RRGGLA.com  
LA0001461 & LC0000267

**SUNRAY RETAIL**

Plans Prepared For

Revision	Date

**SUNRAY RETAIL**  
Pasco County, Florida

Project Title

**LANDSCAPE PLAN**

Project No. 15-032  
Date 10/19/15  
Sheet LA1

PATRICK D. ROBERSON  
FLORIDA REGISTERED  
LANDSCAPE ARCHITECT  
NO. LA0001461

LANDSCAPE GENERAL NOTES

- Permits required by any authority or governing jurisdiction, for any installation or construction work described in the contract documents, shall be obtained by the Contractor. Any applicable fees or financial requirements are to be paid by the Contractor for such permits, unless stipulated specifically in writing by the Owner.
- The Contractor shall comply with all codes, safety requirements, and environmental regulations of federal, state, local and other regulatory agencies that have jurisdiction over the project, without additional cost to the owner. This includes any safety standards of the Occupational Safety and Health Act and amendments. The Owner and Owner's Representative shall be held harmless from any accident, injury or any other incident resulting from compliance or non-compliance with these standards.
- The work included in this Section include the furnishing of all materials, equipment and labor necessary and incidental to the installation and preparation of planting areas, soil treatment, plants, grassing, protection of existing and proposed plants, hauling and spreading of topsoil, finish grading, removal and / or transplanting of existing plants as indicated, warranty, replacement of plants and / or materials, and related items as required to complete the work as indicated on the plans and fulfilling all warranty provisions, as specified herein.
- The work shall also include the maintenance of all landscape plants and materials, planting areas, and sod / seeded areas until the Final Acceptance by the Owner's Representative. This time period of required maintenance may be extended through the full warranty period, as specified in the contract agreement, until Final Project Acceptance.
- During construction, protect all existing trees, shrubs, and other specified vegetation, site features and improvements, structures, installed elements and utilities specified herein and / or on submitted plans. Removal or destruction of items described above is prohibited unless specifically authorized by the Owner.
- The plant list as shown on the plans is for the Contractor's information only and no guarantee is expressed or implied that quantities shown therein are correct or that the list is complete. The Contractor shall verify that all plant material shown on the drawings are included in the Contractor's bid.
- Substitutions of plant materials will not be permitted unless authorized in writing by the Owner's Representative. Proof is to be submitted in writing from 5 different regional sources that a plant specified is not obtainable. Consideration will be given to the nearest available size or similar variety with a corresponding adjustment of the contract price.
- The Contractor shall review and verify the proposed and existing site elements, including but not limited to, storm drainage, water, sewer, phone, cable and electrical utilities, paving, site grading, buildings, walks, hardscape, and vegetation to preclude any misunderstanding and ensure a trouble free installation.
- Stated dimensions shall govern over scaled dimensions on the plans.
- Plants shall be subject to inspection for conformity to specification requirements and approval by the Owner's Representative at their place of growth, or upon delivery to the site, as determined by the Owner's Representative. Such approval shall not preclude the right of inspection and rejection during any phase of the work. Rejected plant materials shall be immediately removed from the project site and replaced with approved plant materials within seven (7) days or as approved by the Owner's Representative.
- All plants may be selected and tagged by the Owner's Representative at their place of growth. For distance material, photographs may be submitted for pre-inspection review and approval by the Owner's Representative. Pictures shall be clear and contain the full image of the plant material to be reviewed and have a clear indication of size in foot increments for trees and palms and inches for shrubs and groundcovers. The photograph will become the representative sample for that plant type (species and size).
- Submit certificates of inspection, as required by governmental authorities, and manufacturers or vendors certified analysis for soil amendments, herbicides, insecticides and fertilizer materials and any additional data that indicates that the materials comply with specified requirements.
- The Contractor shall conduct a minimum of three (3) soil tests at locations as shown on the plans or determined by the Owner's Representative. The Contractor shall test each location for soil composition (type, strata, pH, soluble salts, and organic content) and sub-surface drainage conditions (percolation rate). Soil testing shall be conducted by an approved soil-testing laboratory. The Contractor shall provide the Owner's Representative with the results of the soil analyses prior to any installations throughout the project. If soil conditions are insufficient for proper plant growth, the Contractor is required to supply recommendations for improving the condition of the soil of each area, to the Owner's Representative for approval. The Contractor shall, at the discretion of the Owner's Representative, proceed with the recommendations for improving the soil conditions.
- Trees designated as Ball and Burlap (B&B) shall be properly dug with firm natural balls of soil retaining as many fibrous roots as possible in sizes and shapes as specified in the most recent edition of the American Standard for Nursery Stock. Balls shall be firmly wrapped with nonsynthetic, rottable burlap and secured with heavy nonsynthetic, rottable twine. Root collar shall be apparent at the surface of the rootball. No trees with loose, broken, or manufactured rootballs will be planted, except with written approval of the Owner's Representative, prior to planting.
- Sabal Palms shall have all frond removed prior to planting, leaving a minimum of twelve (12) inches of new frond growth above the bud. Boots shall be removed from the trunk of sabal palms unless otherwise specified by the Owner's Representative. Remove only a minimum number of fronds on other palm species to facilitate the handling of the palm material. Do not damage the buds of any palms and take necessary care to protect the bud during digging, handling, transportation and installation.
- During transportation of plant material, the Contractor shall exercise care to prevent injury and drying out of the trees. Should the roots be dried out, large branches broken, rootball damage, or areas of torn bark, the Owner's Representative may reject the injured plant material and require replacement of the rejected material at no additional cost to the Owner.
- Plant material that is stored improperly shall receive a special review of acceptance or rejection, established on a case by case basis.
- The Contractor shall protect existing pavement, buildings, walks, curbing, walls, hardscape elements, utilities and planting materials (trees, shrubs, ground covers, etc.) which are not designated for removal on the plans from damage.
- The Contractor shall request the proper utility company to stake the exact location of all underground lines including but not limited to electric, gas, cable and/or telephone service prior to layout and excavating of any planting area. The Contractor shall contact Sunshine State One-Call of Florida, Inc. (SSOCOF) at 1-800-432-4770. Per SSOCOF, the calls shall be made a minimum of two days and a maximum of five days before beginning construction operations.
- Not all utilities are members of the Sunshine State One-Call system and direct contact shall be taken as necessary.

- The Contractor shall be responsible for the preservation and protection of all site conditions to remain from damage due to this work. In the event damage does occur, all damage shall be completely repaired to its original condition. All the costs of such work shall be charged to and paid by the Contractor.
- The Contractor shall thoroughly examine the project site, including sub-surface soil conditions, existing and proposed elevations and general conditions under which the work is to be performed. The Contractor shall notify in writing of any conflicts or unsatisfactory conditions discovered, prior to beginning work. If the Contractor begins work before the unsatisfactory condition have been resolved, this will indicate that the Contractor has accepted the existing conditions and is responsible to complete the work at no additional cost to the Owner.
- The Contractor shall be responsible for all unauthorized cutting or damage to existing trees not marked for removal on the plans. Such damage may be caused by operation of equipment, stockpiling of materials, careless labor, etc. This shall include compaction by driving or parking inside the drip-line of trees or the spillage of oil, gasoline, or other deleterious materials within the drip-line of trees.
- The Contractor shall have a clear understanding and identify each existing tree, shrub and / or palm that is designated to remain or to be removed.
- The Contractor shall maintain tree barricades at all times during the construction activities on the project for all existing trees, palms and other plant material within and adjacent to the limits of construction that are specified to remain. The Contractor shall refer to the tree protection detail and notes provided within the Landscape Plans.
- The Contractor shall provide an International Society of Arboriculture (I.S.A.) Certified Arborist with a minimum of five (5) years experience with similar projects, to direct appropriate pruning (roots, branches) and/or other treatment necessary to ensure the health, viability and attractiveness of trees and palms to remain. The Contractor shall be responsible for implementation of the Certified Arborist's instructions.
- Uncover specified work when directed by the Owner's Representative without compensation. Should the material, workmanship, or method of installation not meet the standards specified herein, the Contractor shall replace the work at his own expense.
- Rejected work shall be removed and corrected within seventy-two (72) hours upon notification of rejection by the Owner's Representative.
- Plants shall be true to species, variety and size as specified on the plans and nursery grown in accordance with good horticultural practices under climatic conditions similar to those in the locality of the project.
- All plant material shall comply with all required inspections, grading standards and plant regulations, as set forth by the Florida Department of Agriculture and Consumer Services Division of Plant Industry, Grades and Standards for Nursery Plants, latest edition. All plant material shall also conform to ANSI Standards for Nursery Stock (ANSI Z60.1-1990).
- Plant materials not specifically covered in "Florida's Grade and Standards for Nursery Plants" shall conform to a minimum grade of Florida No. 1 as to health and vitality, condition of foliage, root system, freedom from pests or mechanical damage; heavily branched and densely foliated according to the accepted normal shape; freedom from low and/or "V" shaped crotches.
- The minimum grade for all plant material shall be Florida No. 1 or better.
- Trees with a damaged or cracked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over 3/4 inch in diameter that are not completely closed will be rejected.
- Palms shall have straight trunks (within 3 degrees of vertical) unless otherwise stated on the plans. Palms shall be free from burn marks and / or other damage to the trunk.
- Balled and burlapped (B&B) plants (field grown trees and palms) shall be dug with firm, natural balls of soil of sufficient size to encompass the fibrous and feeding roots of the plants. No plants moved with a ball shall be cracked or broken. B&B root balls shall exhibit small white fibrous roots coming through the burlap. Field grown trees and palms shall be nursery grown material. Root pruning and hardening off of plant material shall be done a minimum of six (6) weeks or for a period as determined by the Owner's Representative, prior to planting at the project. The supplier of the tree material shall supply certification of the date of root pruning and harvest date of the tree material, prior to the installation of the trees at the project site.
- Protect roots or balls of plants at all times from sun and drying winds, excess water and freezing, as necessary until planting.
- Prepared planting soil shall be fertile, friable natural topsoil of loamy character, without admixture of subsoil material, obtained from a well-drained stable site, reasonably free from clay lumps, coarse sands, stones, plants, roots, sticks and other foreign materials. The acidity range shall be between pH 5.5 and 6.5. Prepared planting soil mixture shall consist of three (3) parts native topsoil meeting the above requirements and one (1) part peat. The peat shall be brown to black in color, sterile, weed and seed free, granulated raw peat, containing not more than 9% mineral content on a dry basis.
- Planting shall be coordinated with the underground automatic irrigation system(s) installation. The irrigation system is to supply 100 percent coverage of water to all required landscape plant material and turf at time of landscape installation.
- The Contractor shall supply supplemental water; over the amount of water supplied by the irrigation system, for establishment to all newly installed trees and palms for ninety (90) days, commencing immediately after installation. Supplemental water can be supplied by water truck or direct water source on site (nose bib, reclaimed water, pump/well source), and shall be applied in such a manner to avoid disturbance to mulch and soil, and to avoid damage to plant materials.
- It is the Contractor's responsibility to adjust watering amounts and frequency to ensure proper establishment of all plant material.
- Fertilizer shall be complete, uniform in composition, dry and free flowing. Fertilizer shall be delivered to the site in the original unopened containers, each bearing the manufacturer's statement of analysis. Store in a manner to prevent wetting and deterioration.
- Mulch is to be 100% organic shredded Melaleuca, Pine Bark Nuggets (2" max.) or Eucalyptus mulch, type as approved by the Owner, shall be utilized and installed to a wetted depth of three (3) inches. Mulch shall be free of extraneous sticks and other tree residue.
- A pre-emergent herbicide (Rout, Ronstar or approved equal) shall be applied to all planting areas as specified by manufacturer's recommendations.

- Sod shall be as specified on the plans, in areas designated on the plans, and for disturbed areas within the construction limits, grass sod type shall be well matted with grass roots. The sod shall be taken up in rectangles, preferably 12" x 24", shall be a minimum of 2" in thickness, and shall be live, fresh, and unjured at the time of planting. Sod shall be a minimum of 95% free from all noxious weeds, other grasses, and extraneous materials. The sod shall have a soil mat of sufficient thickness adhering to the roots to withstand all necessary handling.
- The sod shall be planted as soon as possible after being dug, and kept moist and shaded until it is planted. Dumping from vehicles will not be permitted and damaged sod will be rejected. Replanting shall be performed within 24 hours after time of harvesting or sod shall be stacked in an approved manner and properly moistened until planted. Sod which has been cut for more than 72 hours shall not be used unless specifically authorized by the Owner's Representative, after inspection of the sod.
- The work area may have existing utilities, such as, but not limited to, irrigation, phone, cable, electrical, water, sanitary sewer, and storm sewer. The locations of some of these existing utilities may have been indicated on the Plans. However, no guarantee is implied that the Plans are accurate or complete in reference to existing utility information. It shall be the responsibility of the Contractor to verify the location of all such utilities, structures, etc., by hand excavation or other appropriate measures before performing any work that could result in damage or injury to persons, utilities, structures or property. The Contractor shall make a thorough search of the site for utilities, structures, etc., before work is commenced in any particular location.
- The Contractor shall take immediate steps to repair, replace, or restore all services to any utilities or other facilities which are disrupted due to the Contractor's operations. The Contractor shall also engage any additional outside repairs on a continuous basis until services are restored. Contractor shall provide and operate any supplemental temporary services to maintain uninterrupted use of the facilities. All responsibility for damage due to negligence on the part of the Contractor shall be borne by the Contractor and the Contractor shall also be fully responsible for any and all claims resulting from the damage.

- The Contractor shall notify the Owner's Representative, in writing, of soil conditions that the Contractor considers detrimental to the growth of plant material. These conditions are to be described, as well as suggestions for correcting them. Proper soil percolation must be assured at a minimum rate of 1/2" percolation per hour to a depth of a typical tree planting pit.
- Planting areas are to be finished grade to conform to grades on engineering drawings or as noted on the landscape drawings, after full settlement and installation has occurred. The Contractor shall correct or repair the grades as necessary to conform to the finished grades specified. All planting areas shall be free from concrete debris, lumps, depressions, rocks, sticks or other debris and shall be raked and smoothed to conform to the finish grades after the installation of landscape materials. The planting areas shall provide positive surface drainage without puddling of water. This requirement is applicable to sodded areas also. Sodded areas shall present a smooth and finished appearance, meeting finished grades as specified after installation.

- All materials and equipment shall be installed in a neat and workmanlike manner. The Owner's Representative reserves the right to direct the removal and replacement of any items, which, in his opinion, do not present an orderly and workmanlike appearance. Plant locations may also be adjusted by the Owner's Representative due to unforeseen on-site conditions.
- Clean-up work and planting areas of rubbish or objectionable matter. Mortar, concrete and toxic material shall be removed from the surface of all plant beds. These materials shall not be mixed with the soil. Should the Contractor find conditions beneath the soil, which in any way adversely affect the plant growth, he shall immediately call it to the attention of the Owner's Representative. Failure to do so before planting shall make the corrective measures the responsibility of the Contractor.
- If underground construction, utilities or obstructions are encountered during the excavation of planting areas or pits, alternative locations for the plant material shall be selected by the Owner's Representative. Such changes in location shall be made by the Contractor without additional compensation.

- All required trees and palms shall be placed a minimum of four (4) feet from impervious surfaces; shrubs shall be placed a minimum of 18 inches as measured from the edge of the plant.
- All shrub beds shall be considered as a single mulched area. There shall be no sod incorporated within such planted areas. All shrub and groundcovers shall be mulched curb-to-curb or edge of planting bed, unless otherwise indicated. Top of mulch shall be level with the top of curb or surrounding grade.
- Sides of pits and trenches shall be vertical. When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, and/or obstructions, the Owner's Representative shall be notified before planting. Sites with poor drainage may require the use of sloped sides, for pits or trenches.

- In planting areas where soils have been compacted to a density, which is detrimental to plant growth, loosen soils to allow root penetration before the planting pit.
- Width of planting pit shall be 3 times the diameter of the rootball in highly compacted or poorly draining soils, with the sides of the pit sloped.

- Shrubs fertilizer shall be Osmocote Time Released Fertilizer and composed of a fertilizer ratio of 3:1:1 or 3:1:2, (nitrogen: phosphorus: potassium) and contain all primary and secondary trace elements, or approved equal.
- Sod fertilizer shall be composed of sixteen percent (16%) nitrate nitrogen, four percent (4%) phosphorus, eight percent (8%) potassium and contain all primary and secondary trace elements for sodded areas, or approved equal.
- Fertilizer shall be composed of twelve percent (12%) nitrogen, four percent (4%) phosphorus, twelve percent (12%) potassium and contain all primary and secondary trace elements for Florida palm trees.
- Fertilizer shall be applied at the rates recommended by the manufacture and soil testing laboratory. Fertilizer shall be applied as a top dressing only and shall not be mixed in with the backfill material at time of installation. The Contractor shall apply fertilizers at the time of installation. Fertilizer shall be applied per ANSI 300, Part 2 - 1998 and Best Management Practices, Tree and Shrub Fertilization, ISA.
- Trees, shrubs and ground cover shall be set straight and at such a level, that after settlement, the plant ball will stand flush, to 1" - 1/2" above grade. Each plant shall be set in the center of the planting pit (see planting details). Planting goal shall be thoroughly "watered-in" to remove all air pockets around the root ball. Do not rely on the irrigation system to achieve this task. All burlap, rope wires, etc. shall be loosened from the top and sides of the ball, but no burlap shall be pulled from underneath. No more than two (2) inches of soil shall remain over the first major root closest to the soil surface. Remove non-biodegradable nursery wrappings and unwrap burlap from the top 1/3 of the rootball.

- Plant materials such as trees, shrubs and groundcovers shall be planted prior to the planting of the grassed / sodded areas. The grassed / sodded areas shall be protected during and repaired if damaged during the planting installation activities.
- All new furnished trees and palms shall be set plumb at the time they are installed to within a tolerance of three (3) degrees from vertical. Trees and palms found not to be vertically aligned will not be accepted.
- A basin shall be built around all plants or trees that stand-alone and are not located in larger mulched beds. A water-holding soil-dam shall be built on the outside edge of the planting pit to form a basin of sufficient volume to hold water, as per the Planting Details.

- Each tree shall be pruned to preserve the natural character of the plant as shown on the Plans. All softwood (sucker growth) and all broken or badly damaged branches shall be removed with a clean cut. Pruning procedures shall conform to ANSI A300 Part 1 - 2001 and Pruning and Best Management Practices, Tree Pruning, by the International Society of Arboriculture. All pruning shall be previously approved by the Owner's Representative.
- Within one week after the planting, mulch material, as specified, shall be uniformly applied to a minimum wetted thickness of three (3) inches or as indicated on the Plans, over the entire area of the backfilled hole or bed. The mulch shall be maintained continuously in place until the time of final inspection.
- All trees not within planting beds shall be mulched within a three (3) foot diameter of the tree.
- Do not place mulch immediately against trunks of trees and palms.
- Soft spots and inequalities in grade shall be corrected before starting sod work. Soil shall be watered before sod planting. Tamp or roll all newly installed sod. Sod shall be thoroughly watered in.
- The setting of the sod pieces shall be staggered so as to avoid a continuous seam. The offsets of individual strips shall not exceed 6". In order to prevent erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped so as to produce a feathered edge effect. On steep slopes, the Contractor shall, if so directed, prevent the sod from sliding by means of wooden pegs driven through the sod blocks into firm earth, at directed intervals. Sod shall be placed in rows perpendicular to the slope.

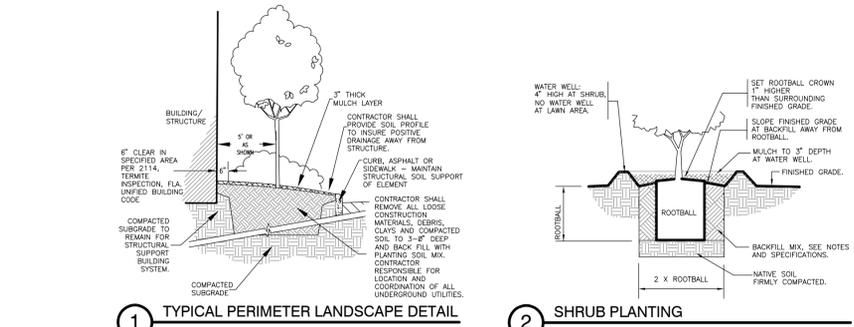
- The project site shall be kept in a relative neat and clean appearance throughout the course of the landscape installation. Perform cleaning during installation of the work and upon completion of the work. Remove from the site all excess materials, soil, debris, and equipment. Repair damage resulting from planting and other landscape installation operations.
- Provide one (1) year warranty covering the life and satisfactory condition of all planted materials. All sod shall be warranted for 90 days after Final Acceptance. The one (1) year warranty does not begin until the entire landscape installation has been accepted by the Owner's Representative at the time of Final Acceptance for Landscape work. After the one (1) year warranty period, the Owner's Representative shall conduct the Project's Final Inspection.
- All plant material and turf not found in a healthy growing condition, questionable survivability or dead at the end or at any time during the warranty period shall be removed from the site and replaced within ten (10) calendar days after written notice.
- All plant material replacements shall be of the same kind and size as specified in the Plant List. They shall be furnished, planted, mulched and watered-in as specified at no additional cost to the Owner. These replacement materials shall be bound to the same warranty conditions as the original materials.
- The Contractor shall notify the Owner's Representative in writing, a minimum of ten (10) days in advance, when all work is substantially complete to schedule a substantial completion. Based on this inspection, the Owner's Representative will develop a punch list of items to be addressed by the Contractor. Upon completion of Punch List Items, the Contractor shall coordinate with the Owner's Representative to schedule a Final Acceptance Inspection. At the time of Final Acceptance, the warranty period shall begin.
- Upon Final Acceptance of the plant material, the Contractor shall submit two (2) written maintenance instructions recommending procedures for the maintenance of plant materials and sod, for a one year period.

**EXISTING TREE PROTECTION GENERAL NOTES**

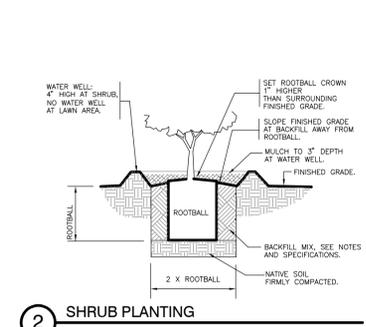
EXISTING TREES AND PALMS WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION AND SPECIFIED TO REMAIN ARE TO BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS WITH TREE BARRICADES PER PASCO COUNTY REQUIREMENTS.

THE CONTRACTOR SHALL PROVIDE AN INTERNATIONAL SOCIETY OF ARBORIST (ISA) CERTIFIED ARBORIST WITH A MINIMUM OF 5 YEARS EXPERIENCE WITH SIMILAR PROJECTS, TO DIRECT APPROPRIATE PRUNING (ROOTS, BRANCHES) AND/OR OTHER TREATMENT NECESSARY TO ENSURE THE HEALTH, VIABILITY AND ATTRACTIVENESS OF TREES TO REMAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF THE CERTIFIED ARBORIST'S INSTRUCTIONS. PRUNING SHALL CONFORM TO ANSI A-300 PRUNING STANDARDS.

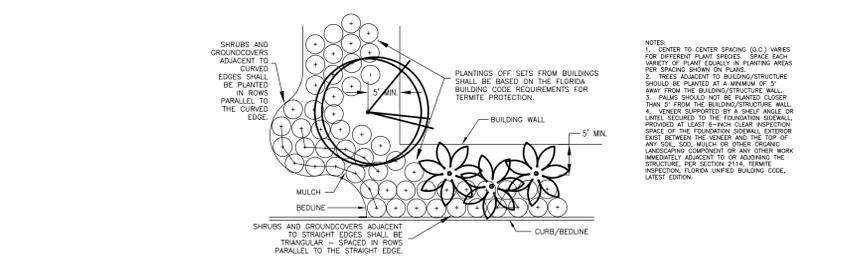
ALL TREE ROOTS EXISTING WITHIN IMPROVEMENT AREAS AND ORIGINATING FROM A PROTECTED TREE, SHALL BE SEVERED CLEAN AT THE LIMITS OF THE PRESERVED AREA WHERE INDICATED ON THE PLANS. ROOT PRUNING SHALL BE ACCOMPLISHED BY MECHANICAL TRENCHER WITH SHARP BLADES AND UNDER THE DIRECT SUPERVISION OF THE CERTIFIED ARBORIST. ROOT PRUNING SHALL MEET THE STANDARDS AND REQUIREMENTS OF PASCO COUNTY AND ISA.



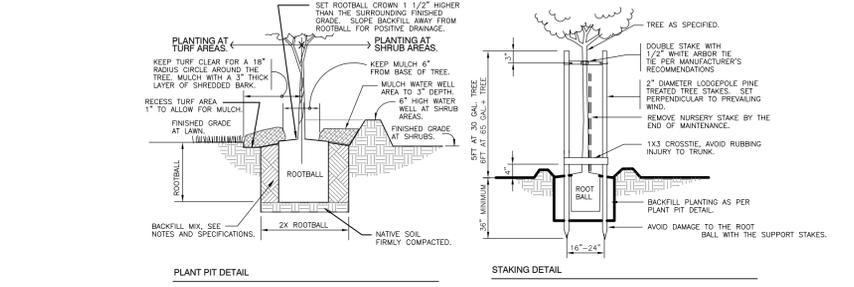
1 TYPICAL PERIMETER LANDSCAPE DETAIL



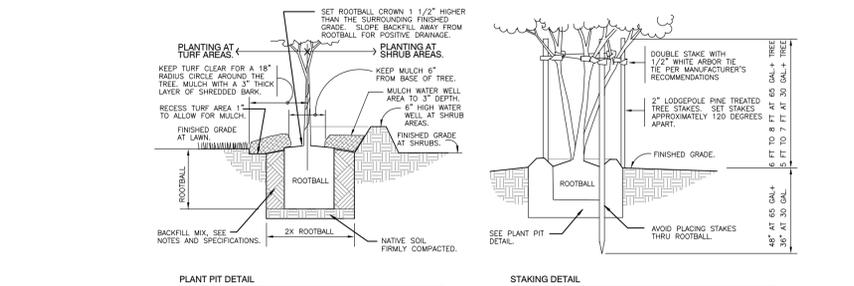
2 SHRUB PLANTING



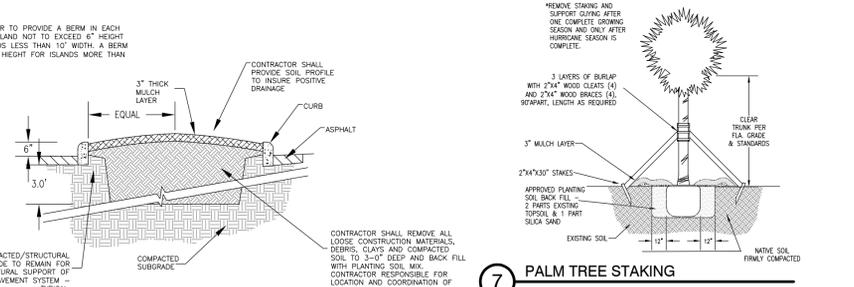
3 PLANT MATERIAL LAYOUT DETAIL



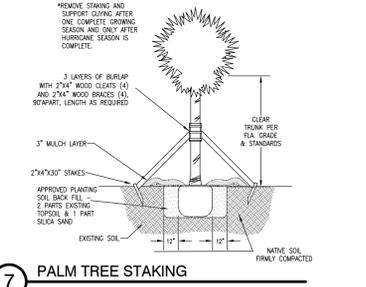
4 SINGLE TRUNK TREE STAKING



5 MULTI-TRUNK TREE STAKING



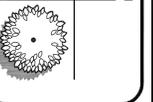
6 TYPICAL LANDSCAPE ISLAND DETAIL



7 PALM TREE STAKING

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Phone: 727-256-4256 Web: RRGL.com  
LA000161 & LC0000267



**SUNRAY RETAIL**

Plans Prepared For

Project No. \_\_\_\_\_  
Date \_\_\_\_\_  
Revision \_\_\_\_\_

**SUNRAY RETAIL**

Pasco County, Florida

**SUNRAY RETAIL**

Pasco County, Florida

**LANDSCAPE NOTES & DETAILS**

Project No. 15-032  
Date 10/19/15  
Sheet LA2

CONSTRUCTION PLANS ARE NOT VALID UNLESS SIGNED & EMBOSSED WITH LANDSCAPE ARCHITECT'S SEAL

PATRICK D. ROBERSON  
FLORIDA REGISTERED LANDSCAPE ARCHITECT  
NO. LA0001461



ENGINEERING & LAND PLANNING  
 BASE INFORMATION PROVIDED BY:  
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 9400 River Crossing Blvd., Suite 104  
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**IRRIGATION SCHEDULE**

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
☐	Rain Bird XCZ-100-PRB-COM Medium Plus Flow Drip Control Kit for Commercial Applications. 1" Ball Valve with 1" PESB Valve and 1" Pressure Regulating 40psi Quick-Check Basket Filter. 3gpm to 20gpm.	4	
⊕	Netafim TLO50MFV-1 Automatic flush valve, 1/2" male pipe thread.	4	
▨	Area to Receive Dnpline Rain Bird XFD-09-12 (12) XFD On-Surface Pressure Compensating Landscape Dnpline. 0.9GPH emitters at 12.0" O.C. Dnpline laterals spaced at 12.0" apart, with emitters offset for triangular pattern. UV Resistant.	3,384 s.f.	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	DETAIL
ⓐ	Rain Bird ESP4ME 4 Station, Hybrid Modular Outdoor Controller. For Residential or Light Commercial Applications.	1	
ⓑ	Rain Bird WR2-RC Wireless Rain Sensor Combo, includes 1 receiver and 1 rain sensor transmitter.	1	
ⓓ	Water Meter 1" Meter and Backflow - verify 20 GPM @ 50 PSI Min. Available	1	
—	Irrigation Lateral Line: PVC Class 200 SDR 21 PVC Class 200 irrigation pipe.	275.2 l.f.	
---	Irrigation Mainline: PVC Schedule 40 PVC Schedule 40 irrigation pipe.	187.0 l.f.	
---	Pipe Sleeve: PVC Schedule 40 4" Irrigation Pipe Sleeve	49.5 l.f.	

**Valve Callout**

# → Valve Number  
 # → Valve Flow  
 # → Valve Size

**VALVE SCHEDULE**

NUMBER	MODEL	SIZE	TYPE	WIRE	PSI	PSI @ POC	GPM	PRECIP
1	Rain Bird XCZ-100-PRB-COM	1"	Area for Dnpline	31.1	29.98	30.65	9.51	1.55 in/h
2	Rain Bird XCZ-100-PRB-COM	1"	Area for Dnpline	48.7	34.34	35.70	15.45	1.55 in/h
3	Rain Bird XCZ-100-PRB-COM	1"	Area for Dnpline	191.3	35.52	37.29	15.86	1.55 in/h
4	Rain Bird XCZ-100-PRB-COM	1"	Area for Dnpline	185.5	31.75	33.10	13.66	1.55 in/h
	Common Wire			187.0				

**CRITICAL ANALYSIS**

P.O.C. NUMBER: 01  
 Water Source Information: Meter and Backflow - verify 20 GPM @ 50 PSI Min. Available

**FLOW AVAILABLE**  
 Water Meter Size: 1"  
 Flow Available: 20.23 gpm

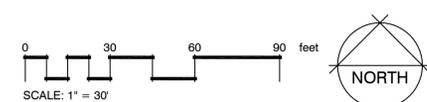
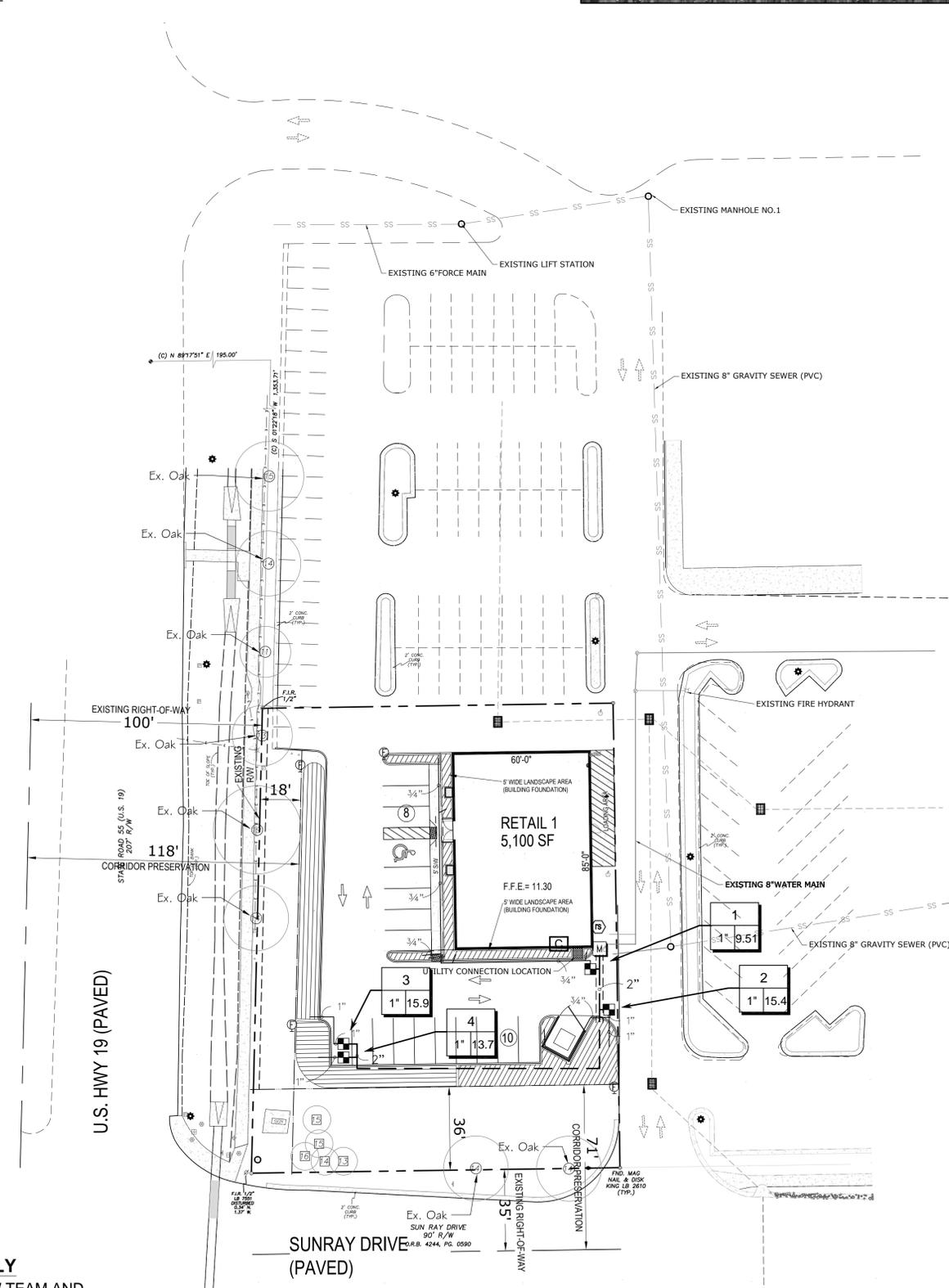
**PRESSURE AVAILABLE**  
 Static Pressure at POC: 50.00 psi  
 Elevation Change: 1"  
 Service Line Size: 20.00 ft  
 Length of Service Line: 20.00 ft  
 Pressure Available: 46.00 psi

**DESIGN ANALYSIS**  
 Maximum Station Flow: 15.86 gpm  
 Flow Available at POC: 20.23 gpm  
 Residual Flow Available: 4.37 gpm

Pressure Req. at Critical Station: 35.52 psi  
 Loss for Fittings: 0.04 psi  
 Loss for Main Line: 0.36 psi  
 Loss for POC to Valve Elevation: 0.00 psi  
 Loss for Backflow: 0.00 psi  
 Loss for Water Meter: 1.37 psi  
 Critical Station Pressure at POC: 37.29 psi  
 Pressure Available: 46.00 psi  
 Residual Pressure Available: 8.71 psi

**IRRIGATION PLANS REVIEW NOTE:**

- SITE REVIEW - DRAFT - INFORMATIONAL PURPOSES ONLY**  
 IRRIGATION PLANS & DETAILS ARE NOT REVIEWED BY SITE REVIEW TEAM AND ARE NOT INCLUDED IN THE SITE DEVELOPMENT PERMIT APPROVAL.
- BUILDING DEPARTMENT REVIEW - FOR REVIEW & APPROVAL**  
 IRRIGATION PLANS & DETAILS TO BE REVIEWED AND PERMITTED THROUGH THE BUILDING DEPARTMENT AND BUILDING PERMITTING PROCESS.



CONSTRUCTION PLANS ARE NOT VALID UNLESS SIGNED & EMBOSSED WITH LANDSCAPE ARCHITECT'S SEAL

PATRICK D. ROBERSON  
 FLORIDA REGISTERED LANDSCAPE ARCHITECT  
 NO. LA0001461

**SUNRAY RETAIL**

Plans Prepared For

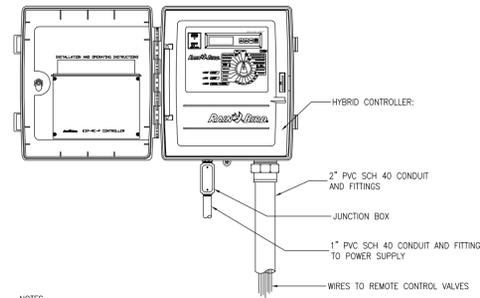
Revision	Date

**SUNRAY RETAIL**  
 Pasco County, Florida

Project Title

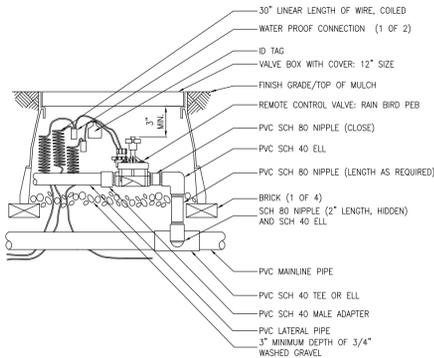
**IRRIGATION PLAN**

Project No. 15-032  
 Date 10/19/15  
 Sheet IR1



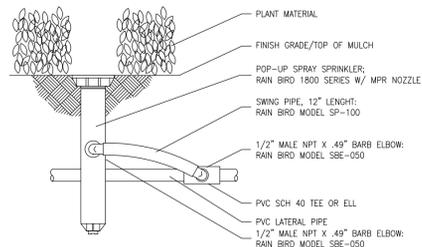
- NOTES:  
 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.  
 2. DO NOT SCALE DRAWINGS.  
 3. INSTALLATION TO BE IN ACCORDANCE WITH STATE AND LOCAL AGENCY CODE REQUIREMENTS.

**HYBRID CONTROLLER**  
RAINBIRD ESP-MC SERIES, OUTDOOR WALL MOUNT



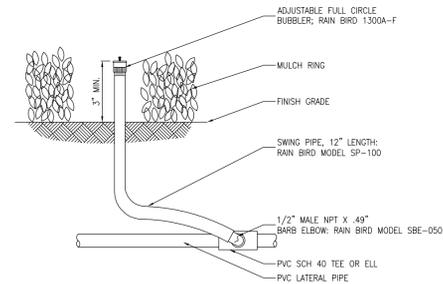
- NOTES:  
 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.  
 2. DO NOT SCALE DRAWINGS.

**REMOTE CONTROL VALVE**  
RAINBIRD PEB VALVE



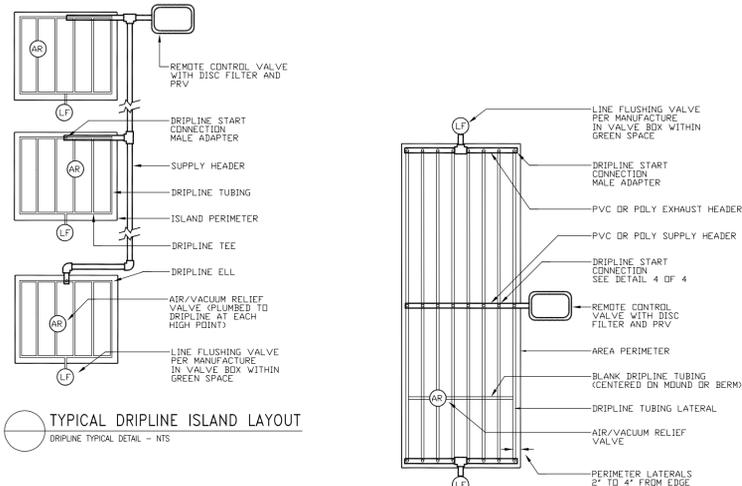
- NOTES:  
 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.  
 2. DO NOT SCALE DRAWINGS.  
 3. POP-UP HEIGHT ADJUSTED FOR CLEARANCE OF PLANT MATERIAL, 12" MIN. HEIGHT

**POP-UP SPRAY SPRINKLER**  
RAINBIRD 1800 SERIES POP-UP SPRAY

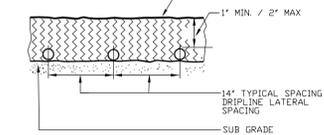


- NOTES:  
 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.  
 2. DO NOT SCALE DRAWINGS.

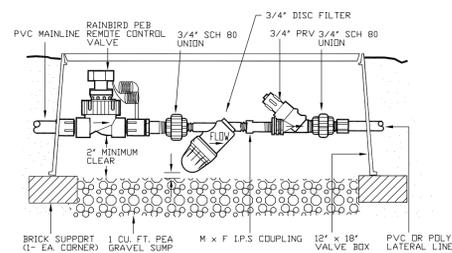
**1300A-F BUBBLER**  
RAINBIRD ADJUSTABLE FLOOD BUBBLER



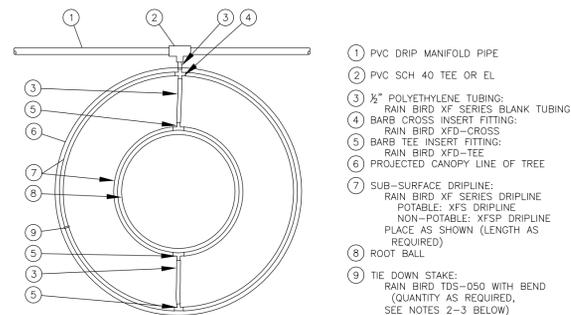
**DRIPLINE CENTER FEED LAYOUT**  
DRIPLINE TYPICAL DETAIL - NTS



**DRIPLINE SUBGRADE INSTALLATION**  
DRIPLINE TYPICAL DETAIL - NTS

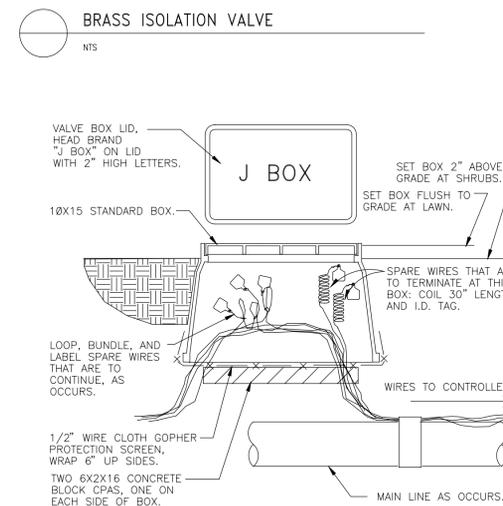


**REMOTE CONTROL VALVE W/ PRV & FILTER**  
DRIPLINE TYPICAL DETAIL - NTS

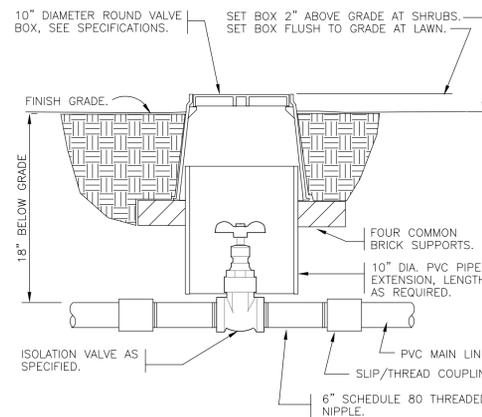


- NOTES:  
 1. DISTANCE BETWEEN LATERAL RINGS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, AND TREE CANOPY, SEE RAIN BIRD XF-SDI DRIPLINE INSTALLATION GUIDE FOR SUGGESTED SPACINGS.  
 2. PLACE TIE-DOWN STAKES EVERY THREE FEET IN SAND, FOUR FEET IN LOAM, AND FIVE FEET IN CLAY.  
 3. AT FITTINGS WHERE THERE IS A CHANGE OF DIRECTION SUCH AS TEES OR ELBOWS, USE TIE-DOWN STAKES ON EACH LEG OF THE CHANGE OF DIRECTION.

**SUB-SURFACE DRIPLINE AROUND TREE**  
NTS



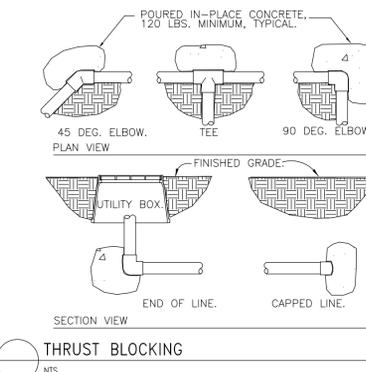
**WIRE BUNDLE JUNCTION BOX**  
NTS



**BRASS ISOLATION VALVE**  
NTS

**IRRIGATION GENERAL NOTES**

- NO PLANTING SHALL OCCUR UNTIL THE UNDERGROUND AUTOMATIC IRRIGATION SYSTEM IS INSTALLED AND FULLY FUNCTIONAL. THE IRRIGATION SYSTEM IS TO SUPPLY 100% COVERAGE TO ALL REQUIRED LANDSCAPE PLANT MATERIAL AND ST. AUGUSTINE TURF.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADJUST WATERING AMOUNTS AND FREQUENCY TO ENSURE PROPER ESTABLISHMENT OF ALL PLANT MATERIAL.
- THE CONTRACTOR SHALL BE FAMILIAR WITH BOTH PROPOSED AND EXISTING SITE CONDITIONS SUCH AS, UTILITIES, PLANT MATERIALS AND ARCHITECTURAL ELEMENTS IN ORDER TO AVOID CONFLICTS DURING INSTALLATION.
- THE CONTRACTOR SHALL AVOID DAMAGE TO EXISTING TREES AND SHRUBS ON SITE THAT MAY OR MAY NOT BE INDICATED ON THE PLANS.
- THE CONTRACTOR SHALL INSTALL THE IRRIGATION SYSTEM IN CONFORMANCE TO ALL APPLICABLE STATE AND REGIONAL REGULATIONS AND CODES.
- A MAXIMUM OF 50% OF THE ON-SITE GREEN SPACE MAY BE ALLOWED TO BE PLANTED WITH ST. AUGUSTINE GRASS SPECIES, CONFIGURED WITH A PERMANENT IRRIGATION SYSTEM. TURF/SODDED AREAS SHALL BE ON SEPARATE IRRIGATION ZONES, THAN OTHER LANDSCAPE PLANT MATERIAL.
- DRIPLINE, BUBBLERS, SPRAY HEADS AND ROTORS SHALL NOT BE COMBINED ON THE SAME CONTROL VALVE CIRCUIT. SPRAY AND ROTOR COMPONENTS SHALL HAVE MATCHING APPLICATION RATES WITHIN EACH IRRIGATION ZONE.
- THE IRRIGATION SYSTEM SHALL BE DESIGNED AND ADJUSTED TO AVOID OVERSPRAY AND RUNOFF ONTO SIGNS, BUILDINGS, WALLS, WALKWAYS, ROADWAY PAVEMENT OR OTHER IMPERVIOUS SURFACES.
- THE IRRIGATION SYSTEM CONTROLLER SHALL HAVE PROGRAM FLEXIBILITY SUCH AS: REPEAT CYCLES AND MULTIPLE PROGRAM CAPABILITIES AND HAVE A BATTERY BACK-UP SYSTEM TO RETAIN IRRIGATION PROGRAMS. THE IRRIGATION CONTROL SYSTEM SHALL BE EQUIPPED WITH AN OPERABLE SOIL MOISTURE SENSOR SHUTOFF DEVICE EXPOSED PER THE MANUFACTURERS SPECIFICATIONS. THE CONTROLLER SHALL ALSO BE EQUIPPED WITH A PUMP START RELAY SYSTEM.
- THE IRRIGATION SYSTEM SHALL BE INSTALLED TO "STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS", LATEST EDITION, (FIFTH EDITION MINIMUM) AND ANY AMENDMENTS, BY THE FLORIDA IRRIGATION SOCIETY, INC.
- RAIN BIRD DRIP TUBING SYSTEM COMPONENTS SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
- SPRAY HEAD AND ROTOR LAYOUT SHALL PROVIDE FOR PROPER HEAD TO HEAD COVERAGE. SPRINKLER SPACING SHALL NOT TO EXCEED 55% OF THE SPRINKLERS DIAMETER OF COVERAGE.
- LANDSCAPE OR SODDED AREAS 4' WIDE OR LESS ARE TO BE IRRIGATED WITH DRIP LINE (MICRO IRRIGATION) ONLY, THESE AREAS ARE INDICATED ON THE PLANS.
- THE IRRIGATION CONTRACTOR SHALL ASCERTAIN THE IRRIGATION SYSTEM REQUIREMENTS FOR GPM AND PSI DEMAND AND DETERMINE IF THE METER AND BACKFLOW ASSEMBLY IS CAPABLE OF MEETING THE DEMAND WITHIN THE ALLOWABLE WATERING TIMES. METER AND BACKFLOW ASSEMBLY TO BE PER LOCAL JURISDICTIONAL REQUIREMENTS AND APPLICABLE STATE OF FLORIDA BUILDING CODES.
- THE IRRIGATION CONTRACTOR SHALL COORDINATE WITH THE SITE/BUILDING CONTRACTOR TO VERIFY ANY REQUIRED ELECTRICALLY POWER FOR THE IRRIGATION SYSTEM IS AVAILABLE.
- WIRE CONNECTIONS FOR ELECTRIC CONTROL VALVES ARE TO BE MADE WITH NORTHSTAR WATERPROOF SPLICE KITS (3M DBT).
- MAINLINE PIPE IS TO BE INSTALLED A MINIMUM OF 18" BELOW FINISH GRADE. LATERAL LINE PIPE IS TO BE INSTALLED A MINIMUM OF 12" BELOW FINISH GRADE.
- THE IRRIGATION CONTROLLER SHALL HAVE PROPER LIGHTNING PROTECTION INSTALLED PER MANUFACTURE AND APPLICABLE CODES.
- CONTROL VALVE WIRES SHALL RUN UNDER THE MAINLINE PIPE.
- THE MAINLINE PIPE AND SLEEVES ARE TO BE SCHEDULE 40 PVC. LATERAL LINE PIPE IS TO BE CLASS 200 PVC. IRRIGATION PIPE SHALL BE PROPERLY SIZED TO A MAXIMUM OF 5 FEET PER SECOND OF WATER VELOCITY FLOW THROUGH THE IRRIGATION SYSTEM.
- NO IRRIGATION COMPONENTS, MAINLINE PIPING, LATERAL PIPING OR TRENCHING SHALL OCCUR WITHIN THE PROTECTED ZONE OF EXISTING TREES ON SITE AS INDICATED ON THE PLANS.



THRUST BLOCKS ARE REQUIRED ON ALL UNRESTRAINED, PUSH-ON GASKETED PIPE JOINTS AND FITTINGS AT DEAD ENDS, AND WHENEVER THE LINE CHANGES DIRECTION OF 30 DEGREES OR MORE. CONCRETE HAVING A COMPRESSIVE STRENGTH OF 2000 PSI OR HIGHER WILL BE SPECIFIED. THRUST BLOCKS WILL BE FORMED AGAINST SOLID, UNEXCAVATED EARTH THAT HAS BEEN UNDAMAGED BY MECHANICAL EQUIPMENT. THE SPACE BETWEEN THE PIPE AND TRENCH WALL WILL BE FILLED TO THE HEIGHT OF THE OUTSIDE DIAMETER OF THE PIPE. SIZE THRUST BLOCKS IN ACCORDANCE WITH ASAE (AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS) STANDARD S-376.2.

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**IRRIGATION NOTES & DETAILS**

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**IR2**

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