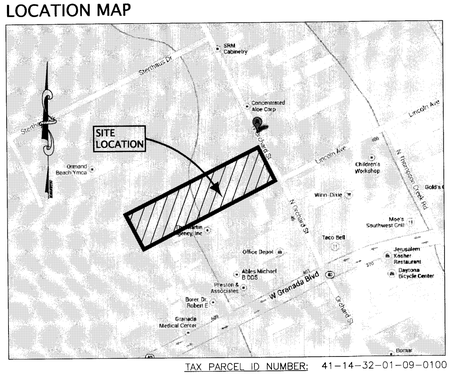
# RV / TRAILER STORAGE

146 N. ORCHARD ST.
ORMOND BEACH, FL 32174

LOCATION MAP




TAX PARCEL ID NUMBER: 41-14-32-01-09-0100

SOILS MAP

TUSCAWILLA FINE SAND: 69 HYDROLOGICAL GROUP D
BULOW SAND: 11 HYDROLOGICAL GROUP A

## LEGAL DESCRIPTION

LOT "D" AND THE EASTERLY 336 FEET OF LOT "E", SUBDIVISION OF GRANT LOT 8, ORMOND AS PER MAP IN MAP BOOK 2, PAGE 118, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, EXCEPTING THEREFROM THE EASTERLY 15 FEET THEREOF.

Description in part taken from an abstract of title, by Attorney's Title Insurance Fund, incorporated, dated 7-25-78, No. 211, 927. Exception taken from Official Records Book 4818, page 1410.

The above described property is in zone "A" (no base flood elevation determined) and in unshaded zone "X", per the Flood Insurance Rate Map, Community Number 125136, Panel Numbers 12127C0212 and 0214 G, dated 4-15-02. Said zones are approximately delineated hereon.


OWNER:
PAT BAYLOR / CLINTON BAYLOR
P.O. BOX 1860 CR 2006
BUNNELL, FL 32110
PH: 386-931-1942
EMAIL: ESTIMATOR.CWB@BELLSOUTH.NET

ENGINEER:
THE ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
880 AIRPORT RD. STE. 113
ORMOND BEACH, FL 32174
PH. (386) 673-7640 FAX: (386) 673-3927
EMAIL: KAB@AE-GROUP.COM

SURVEYOR:
J. J. MATEJKA & ASSOCIATES, INC.
408 HARVEY AVENUE
DAYTONA BEACH, FL 32118
PH. (386) 252-7371
EMAIL:SLAT2900@BELLSOUTH.NET

LANDSCAPE ARCHITECT:
THE STERN DESIGN GROUP, PA
1685 PROMENADE CIRCLE
PORT ORANGE, FL 32129
PH. (386) 788-3788
EMAIL: JANSTERN@STERNDESIGNGROUP.COM


SITE DATA:

FLOOD ZONE: "A" & "X" UNSHADED - 12127C0212 H REV. 2-19-03

EXISTING ZONING:
I-1, LIGHT INDUSTRIAL

FUTURE LAND USE:
LIGHT INDUSTRIAL/UTILITIES

EXISTING USE: VACANT

PARCEL AREA: 5.842 AC.
LIMITS OF CONSTRUCTION: 2.52 AC.

| | |
|---|---|
| EXISTING IMPERVIOUS SURFACE RATIO: | 0. AC. = 0% |
| EXISTING PERVIOUS SURFACE RATIO: | 2.52 AC. = 100% |
| TOTAL AREA: | 2.52 AC. = 100% |
| PROPOSED IMPERVIOUS ASPHALT/CONCRETE: | 0.43 AC. = 17.1% |
| PROPOSED IMPERVIOUS SHELL PARKING: | 0.72 AC. = 28.6% |
| PROPOSED PERVIOUS AREA: | 1.37 AC. = 54.3% |
| TOTAL AREA: | 2.52 AC. = 100% |

BUILDING SETBACKS REQUIRED:
NOT APPLICABLE - NO BUILDINGS PROPOSED

LANDSCAPE BUFFER REQUIRED:
FRONT-20; REAR-20'; SIDE-15'

LANDSCAPE BUFFER PROVIDED:
FRONT-20; REAR-669'+/-; SIDE-15'

PARKING CALCULATIONS:

PARKING REQUIRED:
1 SPACE / 25 RV/STORAGE SPACES
61 SPACES / 25 = 2.44 (3 REQUIRED)

PARKING PROVIDED:
2 STANDARD SPACES
1 HANDICAP SPACE

PROPOSED USES:

RV & TRAILER STORAGE

STATEMENT OF INTENT

TO CONSTRUCT RV & TRAILER SELF STORAGE FACILITY WITH ASSOCIATED PARKING AND INFRASTRUCTURE

HOURS OF OPERATION

SITE ACCESSIBLE TO LESSEE'S 24 HOURS A DAY - 7 DAYS A WEEK

## GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ORMOND BEACH'S LAND DEVELOPMENT CODE REQUIREMENTS, AND THE STANDARD CONSTRUCTION DETAILS AND CONSTRUCTION SPECIFICATIONS (SCDCS). AN ENGINEERING PERMIT AND TREE REMOVAL PERMIT IS REQUIRED PRIOR TO STARTING CONSTRUCTION.
2. NO LAND SHALL BE CLEARED, EXCAVATED OR FILLED AND NO STRUCTURE SHALL BE ERECTED, REPAIRED OR DEMOLISHED WITHOUT PROPER PERMIT(S) AS REQUIRED BY THE CITY OF ORMOND BEACH.
3. NOTIFY THE CITY OF ORMOND BEACH'S ENGINEERING DIVISION AT 676-3269 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. ANY CONSTRUCTION CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO THE CITY OF ORMOND BEACH FOR APPROVAL PRIOR TO PERFORMING THE WORK.
5. ROAD CONSTRUCTION AND PIPE INSTALLATION COMPACTION AND DENSITY TESTING SHALL CONFORM TO THE CITY OF ORMOND BEACH'S MINIMUM REQUIREMENTS. CERTIFIED COPIES OF TEST REPORTS SHALL BE SUBMITTED TO THE CITY INSPECTOR AND THE CITY'S ENGINEERING DIVISION.
6. A PRE-PAVING UTILITY INSPECTION MUST BE REQUESTED AND COMPLETED PRIOR TO THE PAVING OF ALL ROADS, STREETS, AND PARKING AREAS.
7. A FINAL INSPECTION, TO BE CONDUCTED BY THE CITY OF ORMOND BEACH, SHALL BE PERFORMED ON ALL CONSTRUCTION. THE DESIGN ENGINEER SHALL NOTIFY THE CITY OF ORMOND BEACH'S ENGINEERING DIVISION 676-3269 WHEN REQUESTING A FINAL INSPECTION.
8. THREE COMPLETE SETS OF AS-BUILT DRAWINGS (5 FOR SUBDIVISIONS)ARE REQUIRED TO BE SUBMITTED TO THE CITY OF ORMOND BEACH PRIOR TO REQUESTING A FINAL INSPECTION.
9. THE CITY HAS A CONTRACTOR FOR ROLL OFF SERVICE. NO OTHER CONTRACTOR SHALL BE PERMITTED TO PROVIDE THIS SERVICE. VERIFY COMPANY UNDER CONTRACT WITH THE CITY.
10. CONSTRUCTION SITES THAT DISTURB ONE ACRE OR MORE WILL BE REQUIRED TO SEEK COVERAGE UNDER THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES. IN ACCORDANCE WITH THIS REQUIREMENT, A STORMWATER POLLUTION PREVENTION PLAN (SWPP) MUST BE SUBMITTED TO THE CITY'S ENGINEERING DIVISION PRIOR TO CONSTRUCTION TO BE IN COMPLIANCE WITH THE PERMIT.
11. CONTRACTOR WILL FOLLOW REQUIRED WASTE MANAGEMENT PRACTICES.
12. SWEEDING OR SODDING SHALL BE INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED AREAS AS SOON AS PRACTICABLE IN PORTIONS O THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.
13. ANY FIELD MODIFICATIONS OR DEVIATION TO THIS CONSTRUCTION PLAN REQUIRED WRITTEN APPROVAL BY BOTH THE ENGINEER OR RECORD AND THE CITY OF ORMOND BEACH ENGINEERING DIVISION.
14. UTILITY INFORMATION BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL LOCATE & FIELD VERIFY ALL UTILITIES PRIOR TO START OF CONSTRUCTION.
15. ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
16. CONTRACTOR SHALL ATTEND A MANDATORY PRE-CONSTRUCTION MEETING W/CITY STAFF PRIOR TO ANY DISTURBANCE OF PROPERTY.
17. ELEVATIONS BASED ON U.S. GEODETIC SURVEY MONUMENT "T-8".
PUBLISHED ELEVATION = 4.66 FEET (NGVD 29); 3.51 (NAVD 88).
BM1: SITE BENCH MARK 1; NORTH BOLT FIRE HYDRANT; ELEVATION = 10.52' NGVD 29 OR 9.37 NAVD 88
BM2: SITE BENCH MARK 2; NAIL IN WOOD UTILITY POLE; ELEVATION = 9.54' NGVD 29 OR 8.39 NAVD 88
18. THE ABOVE DESCRIBED PROPERTY IS IN ZONE "AE" WITH BASE FLOOD ELEVATION OF 6.75, PER THE FLOOD INSURANCE STUDY REV 2-19-14 & THE FLOOD INSURANCE RATE MAP, COMMUNITY NUMBER 125136, PANEL NUMBERS 12127C0212 J, DATED 2-19-14. SAID ZONES ARE APPROXIMATELY DELINEATED HEREON.

City of Ormond Beach
FINAL APPROVAL
Site Plan Review Committee

ORMOND BEACH
SITE PLAN REVIEW COMMITTEE
FINAL APPROVAL
7, 2015
Date


ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE No. EB5479
880 AIRPORT ROAD, SUITE. 113
ORMOND BEACH, FL 32174
TEL: (386) 673-7640
FAX: (386) 673-3927


| SHEET # | TITLE |
|---|---|
| 1. | OVERALL LAYOUT |
| 2. | TREE REMOVAL / SWPP PLAN |
| 3. | DIMENSION PLAN |
| 4. | GRADING PLAN |
| 5. | CITY CONSTRUCTION DETAILS |
| 6. | CITY CONSTRUCTION DETAILS |
| 7. | FDOT CONSTRUCTION DETAILS |
| 8. | FDOT CONSTRUCTION DETAILS |

146 N. ORCHARD ST
RV/TRAILER STORAGE
ORMOND BEACH, FL

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 2 | 4/28/15 | CITY OF OB RAI | MRZ |
| 1 | 12/17/13 | CITY OF OB RAI | MRZ |

| | |
|---|---|
| DATE 2/20/2013 | SCALE 1"=20' |
| FILE 1107.8 | PROJECT 1107.8 |
| DESIGNER KAB | DRAWN BY MRZ |

OUTSIDE AGENCY PERMIT CHECK LIST

IN ORDER TO ENSURE THAT ALL WORK WITHIN THE CITY IS CONSTRUCTED IN ACCORDANCE WITH ALL RELEVANT FEDERAL, STATE AND COUNTY REGULATIONS, IN ADDITION TO THE CITY REGULATIONS, THE APPLICANT SHALL CHECK ALL OUTSIDE AGENCY PERMITS REQUIRED FOR THIS PROJECT ON THE LIST BELOW.

THIS LIST WILL ALSO BE USED BY CITY PERSONNEL TO VERIFY THAT ONE HARD COPY AND ONE PDF OF ALL REQUIRED PERMITS ARE SUBMITTED TO THE PLANNING DEPARTMENT PRIOR TO FINAL SITE PLAN REVEW COMMITTEE (SPRC) SIGNOFF.

(SELF CERTIFICATION)
1 [ x ] SJRWMD ENVIRONMENTAL RESOURCE PERMIT (ERP)
2 [ ] DEP WASTEWATER CONSTRUCTION/CONNECTION PERMIT
3 [ ] DEH WATER CONSTRUCTION/CONNECTION PERMIT
4 [ ] FDOT UTILITY PERMIT
5 [ ] FDOT DRIVEWAY CONNECTION PERMIT
6 [ ] COUNTY USE PERMIT
7 [ ] FDOT DRAINAGE CONNECTION PERMIT
8 [ x ] DEP NPDES NOI
9 [ ] OTHER (PLEASE SPECIFY)

| | | |
|---|---|---|
| | STANDARD CONSTRUCTION DETAIL | INDEX |
| | OUTSIDE AGENCY PERMIT CHECK LIST | M-21 |
| | NTS | MARCH 2014 |

KIMBERLY ANN BUCK
LICENSE
No. 38565
STATE OF FLORIDA
KIMBERLY A. BUCK, P.E. #38565
NOT VALID UNLESS SIGNED & SEALED

SHEET
OF

ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE No. EB5479
880 AIRPORT ROAD, SUITE. 113
ORMOND BEACH, FL 32174
TEL: (386) 673-7640
FAX: (386) 673-3927


# 146 N. ORCHARD ST RV/TRAILER STORAGE ORMOND BEACH, FL

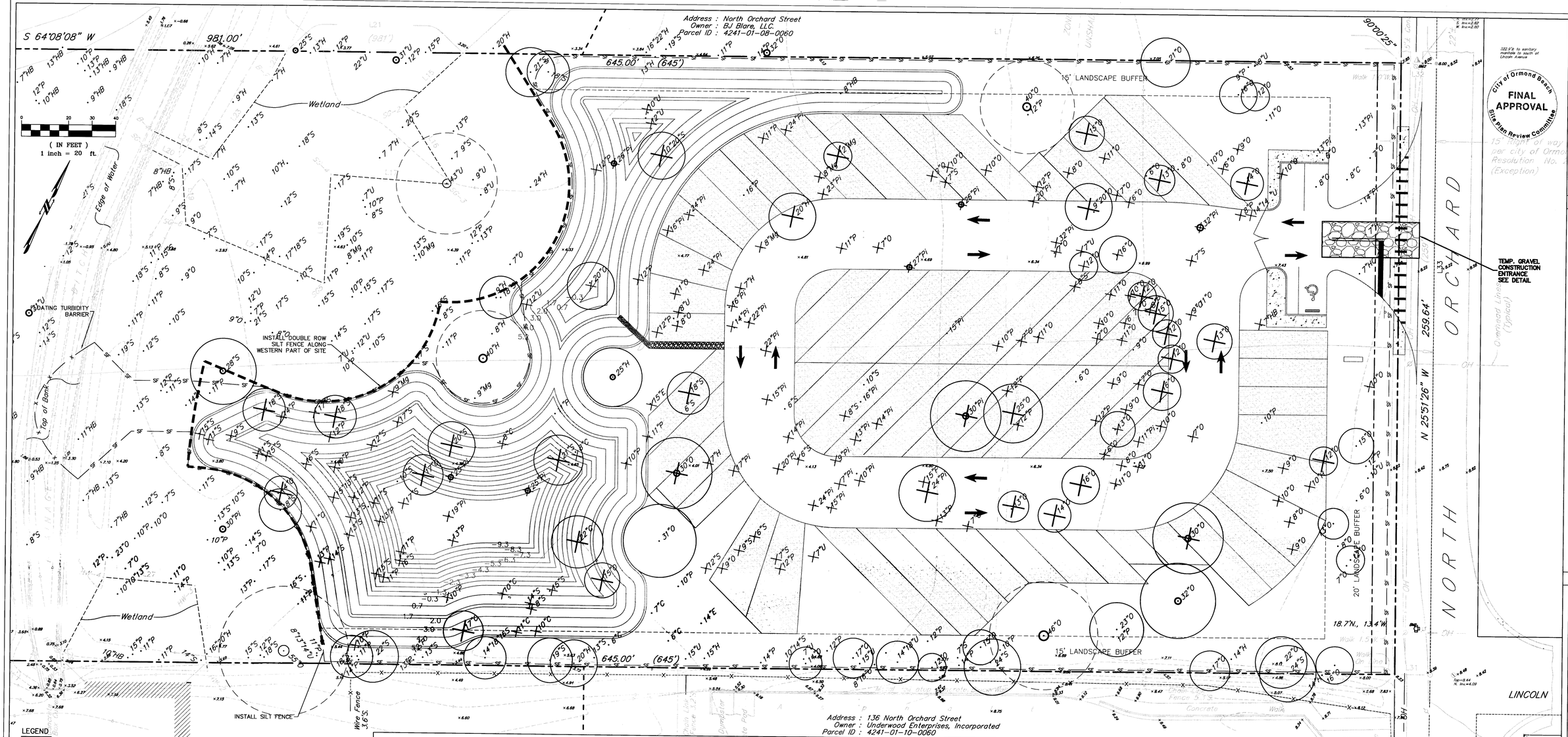
## OVERALL LAYOUT

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MRZ |

| DESIGNER | FILE | DATE |
|---|---|---|
| KAB | 1214.1 | 5-15-2013 |
| DRAWN BY | PROJECT | SCALE |
| CTB | 1214-1 | 1:40 |

KIMBERLY ANN BUCK LICENSE No. 38565 STATE OF FLORIDA PROFESSIONAL ENGINEER
KIMBERLY A. BUCK, P.E. #38565
NOT VALID UNLESS SIGNED & SEALED

SHEET 1 OF 8




LEGEND

- EXIST. GRADE
- PROP. GRADE
- TREE TO BE REMOVED
- HISTORIC TREE
- SPECIMEN TREE
- PROPOSED SHELL STORAGE LOT
- PROPOSED ASPHALT DRIVE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED 6' SECURITY FENCE
- PROPOSED SILT FENCE
- PROPOSED FLOATING TURBIDITY BARRIER
- CROSS SECTION IDENTIFIER (TOP) PAGE NUMBER (BOTTOM)

*Tree Legend*

*B=Bay*
*C=Cedar*
*E=Elm*
*H=Hickory*
*HB=Hackberry*
*HC=Hercules' Club*
*M=Maple*
*Mg=Magnolia*
*O=Oak*
*P=Palm*
*Pi=Pine*
*S=Sweetgum*
*U=Unknown*

TOTAL SPECIMEN & HISTORIC TREES = 61 SPEC, 3 HISTORIC = 64 TOTAL
LIMITS OF CONSTRUCTION = 2.52 AC.
SPECIMEN TREES PER ACRE = 25.40
SPECIMEN TREES REQ'D TO SAVE = 4/AC OR 10
SPECIMEN TREES PROPOSED TO SAVE = 30 SPEC, 3 HISTORIC

**CONTROLS:**
IT IS THE CONTRACTOR'S RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE STORMWATER POLLUTION PREVENTION PLAN. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED, MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE STORMWATER POLLUTION PREVENTION PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED AND OUTLINE IN THE FDEP'S MAUNUAL ON UNIFORM EROSION CONTROL MEASURES (LATEST EDITION), TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED TO MEET THE EROSION AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.

**SITE DESCRIPTION**
5.84 ACRES OF UNDEVELOPED PROPERTY.
2.42 ACRES (LIMITS OF CONSTRUCTION)

**PROJECT NAME AND LOCATION:**
RV / TRAILER STORAGE
146 N. ORCHARD ST
ORMOND BEACH, FL 32174

**OWNER NAME AND ADDRESS:**
PAT BAYLOR / CLINTON BAYLOR
P.O. BOX 1860 CR 2006
BUNNELL, FL 32110

**DESCRIPTION:**
COMMERCIAL RV & TRAILER SELF STORAGE

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
- CLEARING AND GRUBBING;
- EARTHWORK, AND GRADING;
- STORMWATER RETENTION
- PREPARATION FOR FINAL PLANTING AND SEEDING.

**RUNOFF CURVE NUMBERS:**
1. PRE-CONSTRUCTION – 82
2. DURING CONSTRUCTION – 82
3. POST-CONSTRUCTION – 88

**SOILS:**
#69 TUSCAWILLA FINE SAND
#11 BULOW SAND

**SITE MAPS:**
SEE ATTACHED GRADING PLAN FOR PRE & POST-DEVELOPMENT GRADES, AREAS OF SOILS DISTURBANCE, LOCATION OF PROTECTED AREAS, MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS. SEE STORMWATER POLLUTION PREVENTION PLAN AND ACCOMPANYING DETAILS PERTAINING TO LOCATION OF TEMPORARY STABILIZATION PRACTICES AND TURBIDITY BARRIERS. SEE GENERAL NOTES FOR REQUIREMENTS FOR TEMPORARY AND PERMANENT STABILIZATION.

**SPILL PREVENTION:**
MATERIAL MANAGEMENT PRACTICES THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF. GOOD HOUSEKEEPING THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT. AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB. ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL. SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER. WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED. THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

**HAZARDOUS PRODUCTS** THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RE-SEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND SITE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

**OTHER CONTROLS**

**WASTE DISPOSAL WASTE MATERIALS:**
ALL WASTE MATERIALS EXCEPT LAND CLEANING DEBRIS SHALL BE COLLECTED AND SORTED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED>

**HAZARDOUS WASTE:**
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT. THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS,, WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

**SANITARY WASTE:**
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTES WILL BE COLLECTED AND DEPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS

**OFF-SITE VEHICLE TRACKING:**
A STANDARD CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OR SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

**INVENTORY FOR POLLUTION PREVENTION PLAN:**
THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

**SITE AREA:**
1. TOTAL AREA OF SITE – 5.84 ACRES
2. TOTAL AREA TO BE DISTURBED – 2.52 ACRES
3. NAME OF RECEIVING WATERS: TOMOKA RIVER

**CONTROLS:** THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. AN EROSION AND TURBIDITY PLAN HAS BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTIONS AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTOR'S RESPONSIBILITY" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MEY BE IMPLEMENTED.

**TIMING OF CONTROL MEASURES:** REFER TO "CONTRACTOR'S RESPONSIBILITY" FOR THE TIMING OF CONTROL MEASURES.

**CONTRACTOR'S RESPONSIBILITY:** THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE STORMWATER POLLUTION PREVENTION PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS.

**PETROLEUM PRODUCTS:** ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

**FERTILIZERS** FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

**PAINTS** ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

**CONCRETE TRUCKS** CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

**SEQUENCE OF MAJOR ACTIVITIES (TIMING): THE ORDER OF ACTIVITIES SHALL BE AS FOLLOWS:**
1. INSTALL STABILIZED CONSTRUCTION ENTRANCES OFF ORCHARD STREET.
2. INSTALL SILT FENCES AND STAKED TURBIDITY BARRIERS AS SPECIFIED IN DETAILS.
3. CLEAR AND GRUB. STOCK PILE TOP SOIL ON SITE.
4. PERFORM PRELIMINARY GRADING ON SITE AS NECESSARY.
5. STABILIZE DENUDED AREAS AS SOON AS GRADING IS COMPLETE.
6. INSTALL STORM DRAIN SYSTEMS.
7. COMPLETE GRADING.
8. PLACE SILT SACKS WITHIN STORM DRAIN INLETS UNTIL COMMENCEMENT FINAL STABILIZATION.
9. CHECK SILT FENCES AND TURBIDITY BARRIERS FOR ACCUMULATION OF DEBRIS. REMOVE DEBRIS AS NECESSARY. INSPECT SILT FENCE FOR ACCUMULATION OF SILT AFTER EVERY RAINSTORM AND AT A MINIMUM OF ONCE PER WEEK. REPLACE TORN OR FALLEN FENCE AS NECESSARY.
10. REMOVE ACCUMULATED SEDIMENT FROM SEDIMENT BASINS.

**SPILL CONTROL PRACTICES** IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THE PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP: MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (I.E. KITTY LITTER OR EQUAL) SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

**ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.**
THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE. SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL. THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED. THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

**MAINTENANCE/INSPECTION PROCEDURES** EROSION AND SEDIMENT CONTROL, INSPECTION AND MAINTENANCE PRACTICES THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS. ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER. ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD OF THE HEIGHT OF THE FENCE. SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB, WHICHEVER COMES FIRST. DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED. TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS. THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND NOTICE OF TERMINATION IS SUBMITTED. THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER. NON-STORM WATER DISCHARGES IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD: WATER FROM WATER LINE FLUSHING PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED). UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION). ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.


ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE No. EB5479
860 AIRPORT ROAD, SUITE. 113
ORMOND BEACH, FL 32174
TEL: (386) 673-2424
FAX: (386) 673-3927

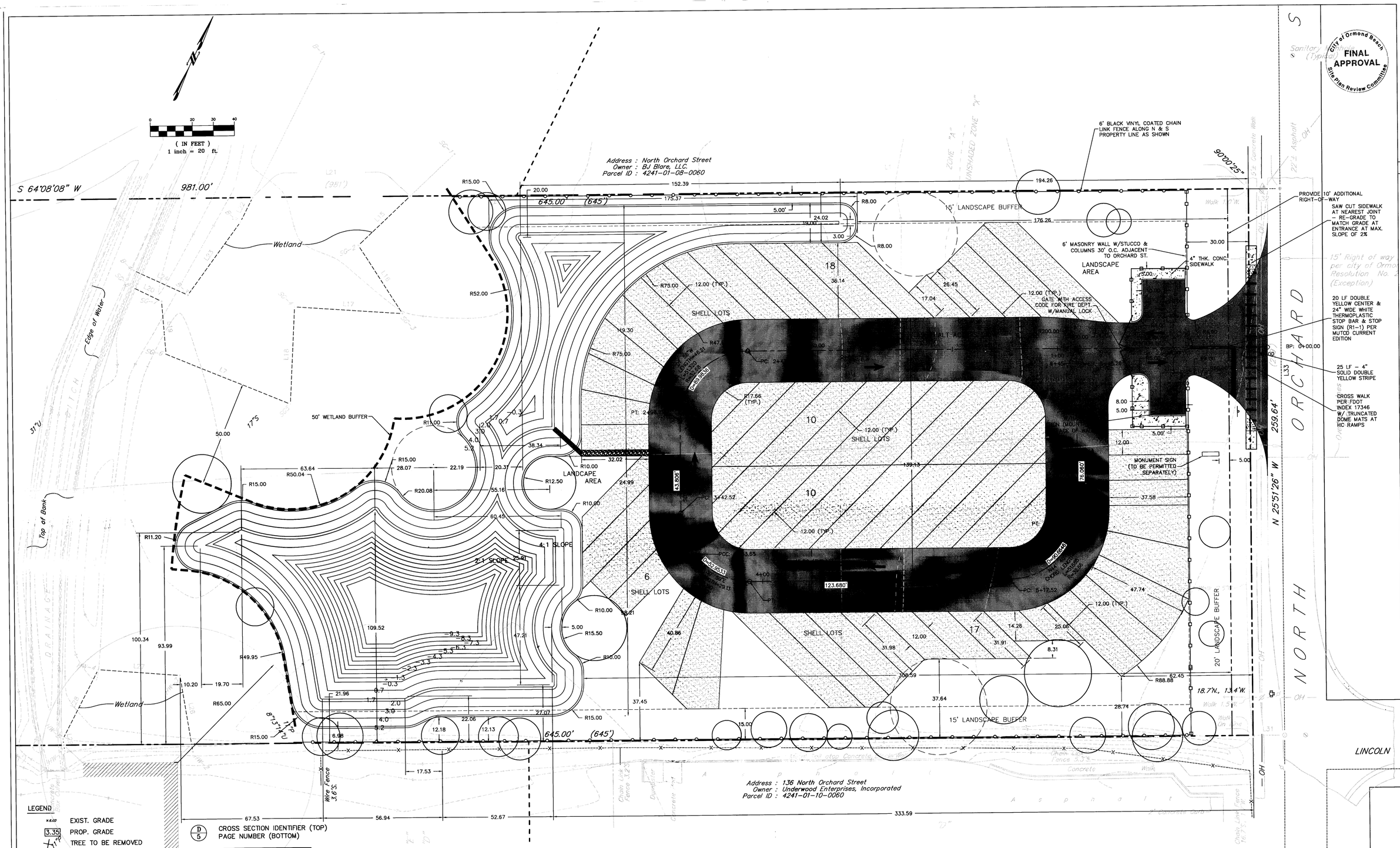

# 146 N. ORCHARD ST
# RV/TRAILER STORAGE
# ORMOND BEACH, FL
## TREE REMOVAL / SWPPP

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MR2 |

| | |
|---|---|
| DATE | 5-15-13 |
| SCALE | 1:20 |
| FILE | 1214.1 |
| PROJECT | 1214-1 |
| DESIGNER | KAB |
| DRAWN BY | CTB |

KIMBERLY A. BUCK, PE #38565
NOT VALID UNLESS SIGNED & SEALED

SHEET
2 OF 8




LEGEND

- EXIST. GRADE
- PROP. GRADE
- TREE TO BE REMOVED
- HISTORIC TREE
- SPECIMEN TREE
- PROPOSED SHELL STORAGE LOT
- PROPOSED ASPHALT DRIVE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED 6' SECURITY FENCE
- PROPOSED SILT FENCE
- PROPOSED FLOATING TURBIDITY BARRIER
- CROSS SECTION IDENTIFIER (TOP) / PAGE NUMBER (BOTTOM)

*Tree Legend*

*B=Bay*
*C=Cedar*
*E=Elm*
*H=Hickory*
*HB=Hackberry*
*HC=Hercules' Club*
*M=Maple*
*Mg=Magnolia*
*O=Oak*
*P=Palm*
*Pi=Pine*
*S=Sweetgum*
*U=Unknown*

SITE DATA:

HOURS OF OPERATION: 24 HOUR ACCESS

TOTAL LIMITS OF CONSTRUCTION = 2.52 AC.
PROPOSED ROADWAY/IMPERVIOUS AREA = 0.43 AC.
TOTAL PROPOSED SHELL STORAGE LOTS = 58 (0.72 AC.)

TREATMENT VOLUME REQUIRED: 0.36 AC-FT
FILL IN FLOOD PLAIN: 0.83 AC-FT
RETENTION/COMPENSATING STORAGE VOLUME:
TOTAL REQUIRED: 0.66 AC-FT.
TOTAL PROVIDED: 0.83 AC-FT

City of Ormond Beach
FINAL APPROVAL
Site Plan Review Committee

ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE NO. EB5479
880 AIRPORT ROAD, SUITE 113
ORMOND BEACH, FL 32174
TEL: (386) 673-7640
FAX: (386) 673-3927

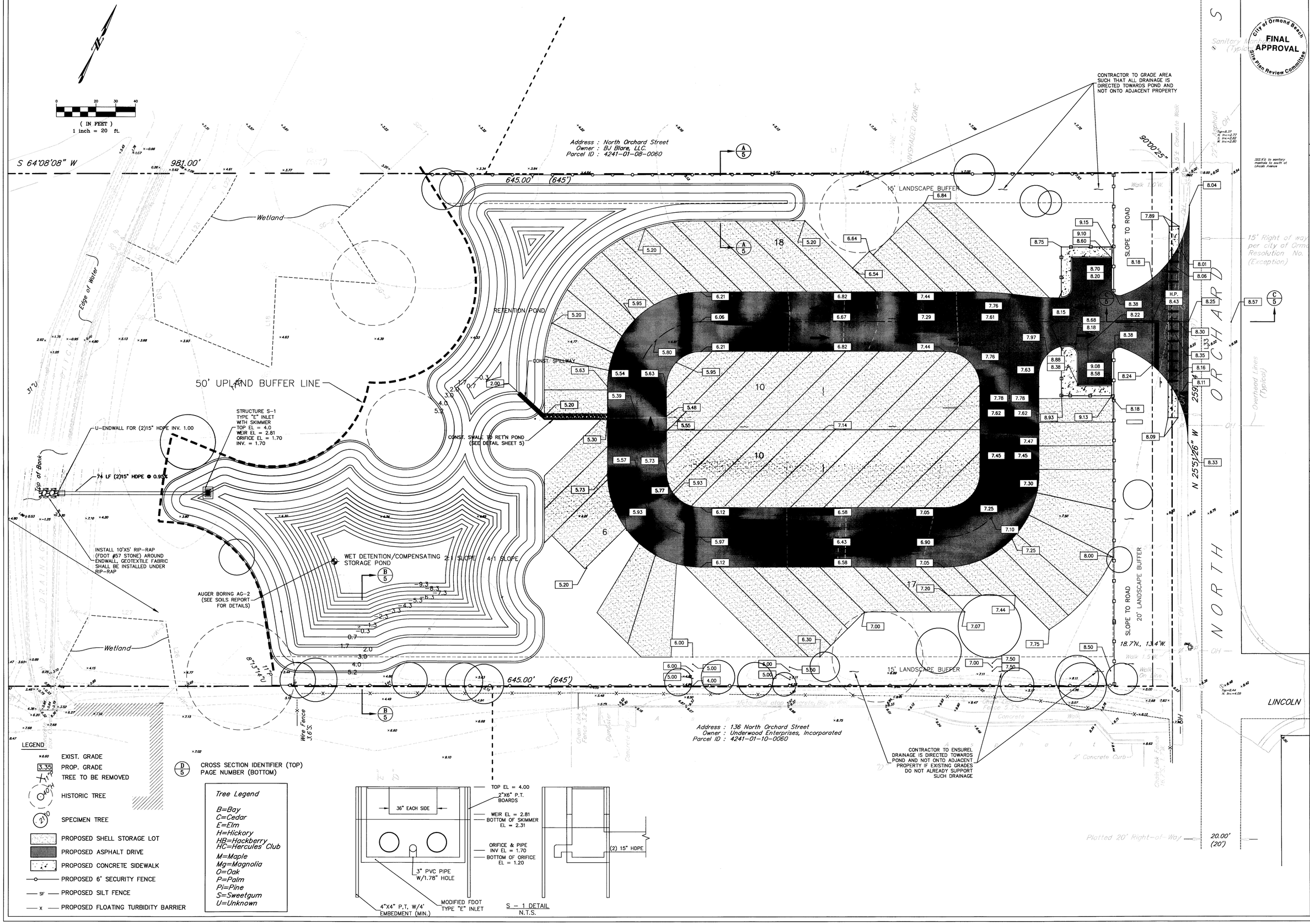
# 146 N. ORCHARD ST
# RV/TRAILER STORAGE
# ORMOND BEACH, FL
## DIMENSION PLAN

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MRZ |

| | |
|---|---|
| DATE 5-15-2013 | SCALE 1:20 |
| FILE 1214-1 | PROJECT 1214-1 |
| DESIGNER KAB | DRAWN BY CTB |

KIMBERLY A. BUCK LICENSE NO. 68565 STATE OF FLORIDA PROFESSIONAL ENGINEER
KIMBERLY A. BUCK, P.E. #68565
NOT VALID UNLESS SIGNED & SEALED

SHEET 3 OF 8




LEGEND

- EXIST. GRADE
- 3.35 PROP. GRADE
- TREE TO BE REMOVED
- HISTORIC TREE
- SPECIMEN TREE
- PROPOSED SHELL STORAGE LOT
- PROPOSED ASPHALT DRIVE
- PROPOSED CONCRETE SIDEWALK
- PROPOSED 6' SECURITY FENCE
- SF PROPOSED SILT FENCE
- x PROPOSED FLOATING TURBIDITY BARRIER
- D/5 CROSS SECTION IDENTIFIER (TOP) PAGE NUMBER (BOTTOM)

*Tree Legend*

*B=Bay*
*C=Cedar*
*E=Elm*
*H=Hickory*
*HB=Hackberry*
*HC=Hercules Club*
*M=Maple*
*Mg=Magnolia*
*O=Oak*
*P=Palm*
*Pi=Pine*
*S=Sweetgum*
*U=Unknown*




S - 1 DETAIL
N.T.S.

City of Ormond Beach
FINAL APPROVAL
Site Plan Review Committee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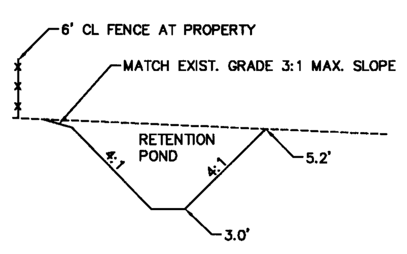
# 146 N. ORCHARD ST
# RV/TRAILER STORAGE
# ORMOND BEACH, FL
## GRADING PLAN

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MRZ |

| DESIGNER | FILE | DATE |
|---|---|---|
| KAB | 1214-1 | 5-15-2013 |
| DRAWN BY | PROJECT | SCALE |
| CTB | 1214-1 | 1:20 |

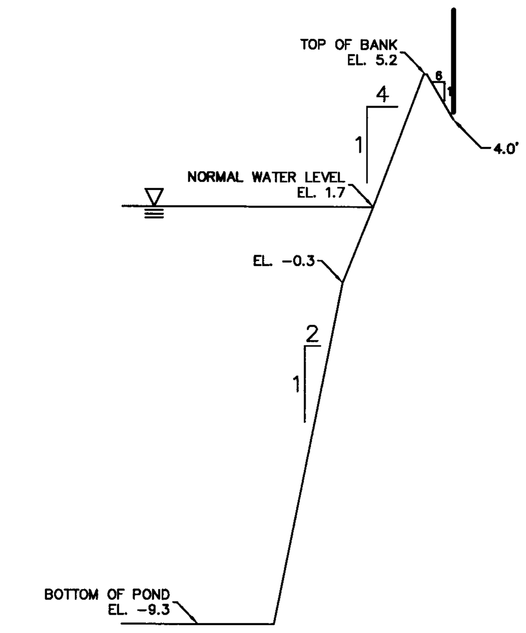
KIMBERLY A. BUCK, P.E. #38565
NOT VALID UNLESS SIGNED & SEALED

SHEET
4 OF 8



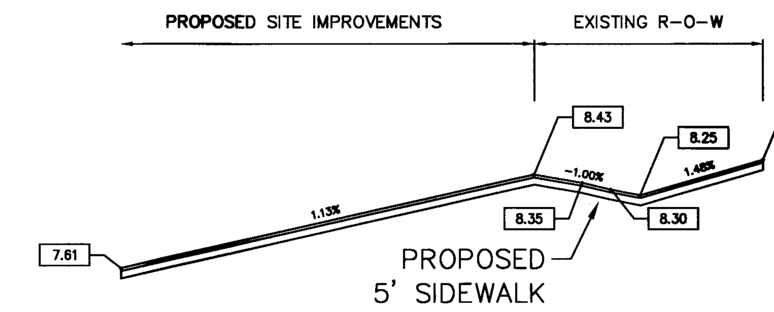

SECTION A–A

NOTE: SOD STAKED IN PLACE ON BANKS TO WATER LINE

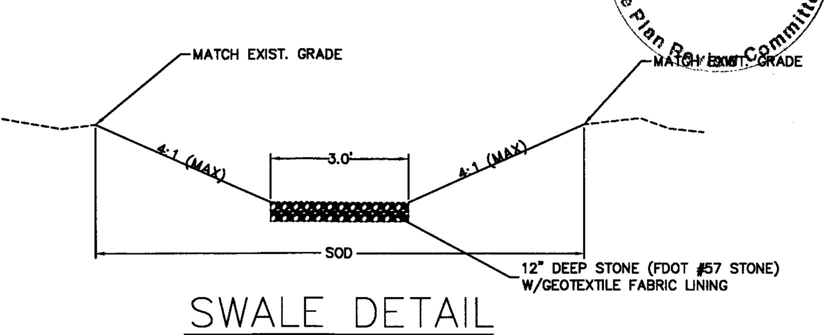



SECTION B–B

NOTE: SOD STAKED IN PLACE ON BANKS TO WATER LINE



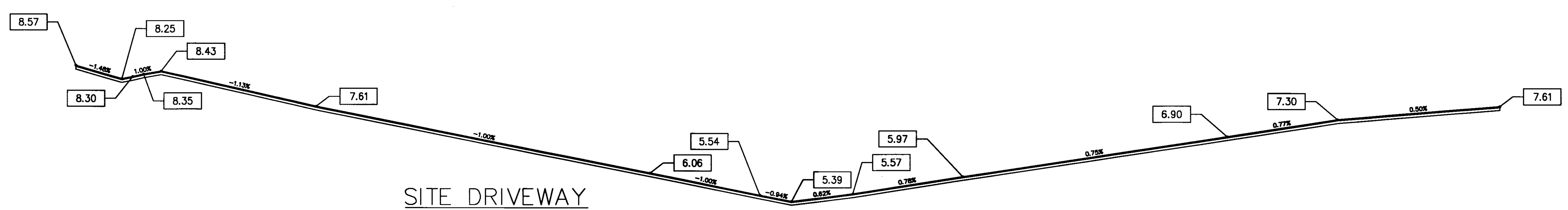

SECTION C–C




SWALE DETAIL

City of Ormond Beach FINAL APPROVAL Site Plan Review Committee

PLAN VIEWS FOR ALL SECTION DETAILS ARE LOCATED ON SHEET 4




SITE DRIVEWAY CENTERLINE GEOMETRY

IN ORDER TO ENSURE THAT NEW DEVELOPMENTS WITHIN THE CITY ARE CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH CITY REGULATIONS AND THE APPROVED DRAWINGS "AS-BUILT" DRAWINGS ARE REQUIRED:

THE FOLLOWING INFORMATION IS REQUIRED ON ALL PAVING AND DRAINAGE "AS-BUILT" DRAWINGS:

1. PAVEMENT AND CURB WIDTHS SHALL BE VERIFIED AND DIMENSIONED FOR EACH STREET AT EACH BLOCK. ALL RADII AT INTERSECTIONS SHALL BE VERIFIED AND DIMENSIONED. THIS INFORMATION TO CLEARLY INDICATE IT AS AS BEING "AS-BUILT" INFORMATION.
2. ROADWAY ELEVATIONS SHALL BE RECORDED AT ALL GRADE CHANGES OR OTHER INTERVALS AS NEEDED ALONG ALL STREETS. STREET CENTERLINE AND CURB INVERT ELEVATIONS SHALL BE RECORDED AS NOTED. THE "AS-BUILT" CENTERLINE PROFILE OF ALL STREETS SHALL ALSO BE SHOWN ON THE PLAN AND PROFILE SO IT MAY BE COMPARED TO THE EXISTING AND DESIGNED PROFILE GRADE LINES. ALL STREET CENTERLINES ON "AS-BUILTS" SHALL BE LABELED WITH STREET NAME AND RIGHT-OF-WAY WIDTH ON EVERY PAGE.
3. STORM DRAINAGE STRUCTURES SHALL BE LOCATED AND/OR DIMENSIONED FROM CENTERLINES OR LOT LINES AS APPROPRIATE.
4. STORM DRAINAGE PIPE INVERT AND STRUCTURE TOP AND BOTTOM ELEVATIONS SHALL BE RECORDED AND CLEARLY DENOTED AS "AS-BUILT" INFORMATION. DESIGN ELEVATIONS SHALL BE CROSSED OUT AND "AS-BUILT" INFORMATION WRITTEN NEXT TO IT.
5. STORM DRAINAGE PIPE MATERIAL, LENGTH, AND SIZE SHALL BE MEASURED AND/OR VERIFIED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.
6. ALL APPLICABLE TOPOGRAPHIC INFORMATION, PERTINENT TO THE ON SITE DRAINAGE SYSTEM SUCH AS DITCHES, LAKES, CANALS, ETC. THAT ARE DEEMED APPROPRIATE BY THE CITY SHALL BE NOTED. NORMALLY, RECORDING ELEVATIONS EVERY 100 FEET AT THE TOP OF BANK AND TOE OF SLOPE WILL BE REQUIRED. MEASUREMENTS SHALL BE TAKEN AND RECORDED IN ORDER TO ACCURATELY TIE DOWN THESE FEATURES TO THE ROADWAY CENTERLINES AND TO PLAT LINES. WHENEVER POSSIBLE, CONTOUR LINES SHALL BE UTILIZED TO GRAPHICALLY DESCRIBE THESE TOPOGRAPHIC FEATURES.
7. RETENTION AREAS SHALL HAVE THEIR TOP-OF-BANK AND BOTTOM ELEVATIONS RECORDED. ACTUAL MEASUREMENTS SHALL BE TAKEN AND DIMENSIONS RECORDED OF THE SIZE OF ALL RETENTION AREAS. MEASUREMENTS SHALL BE DONE FROM TOP-OF-BANK TO TOP-OF-BANK WITH SIDE SLOPES INDICATED. SEPARATE CALCULATIONS SHALL BE SUBMITTED TO INDICATE REQUIRED AND PROVIDED RETENTION VOLUMES.
8. STORM DRAINAGE SWALE CENTERLINES SHALL BE LOCATED AND ELEVATIONS OF FLOW LINE SHALL BE RECORDED EVERY 100 FEET.
9. ANY SPECIAL FEATURES SUCH AS CONCRETE FLUMES, LAKE BANKS, WALLS, FENCING, ETC., WHICH WERE A PART OF THE APPROVED CONSTRUCTION DRAWINGS SHOULD ALSO BE LOCATED AND DIMENSIONED.
10. ACTUAL MATERIALS USED AND ELEVATIONS AND DIMENSIONS OF OVERFLOW WEIR STRUCTURES AND SKIMMERS SHALL BE NOTED ON THE "AS-BUILT".

THE FOLLOWING INFORMATION IS REQUIRED ON ALL WATER AND SEWER "AS-BUILT" DRAWINGS:

11. SANITARY SEWER MANHOLES SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. ALL RIM AND INVERT ELEVATIONS SHALL BE VERIFIED AND RECORDED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.
12. SANITARY SEWER LINE LENGTHS, SIZES, MATERIAL, SLOPE, ETC., SHALL BE VERIFIED AND RECORDED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.

STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR "AS-BUILT" DRAWINGS
INDEX M–1A
MARCH 2014

13. SEWER LATERALS SHALL BE VERIFIED AND RECORDED AT THEIR CLEAN-OUT LOCATIONS. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TOWARDS UPSTREAM MANHOLES.
14. LIFT STATIONS AND FORCE MAINS SHALL BE VERIFIED AND DIMENSIONED FROM STREET CENTERLINES OR LOT LINES AS APPROPRIATE. FORCE MAIN DEPTH AND LOCATION INCLUDING VALVES WILL BE PROVIDED AND TIED TO PERMANENT ABOVE GRADE FEATURES EVERY 500 FEET. DIMENSIONAL AND ELEVATION INFORMATION INDICATED ON THE APPROVED PLAN SHALL BE VERIFIED AND RECORDED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION. BURIED ELECTRICAL SERVICE LINE SHALL BE CLEARLY DIMENSIONED, LOCATED AND LABELED.
15. CURB CUTS OR METAL TABS, USED TO MARK SEWER LATERALS, WATER SERVICES AND WATER VALVES, SHALL BE VERIFIED FOR PRESENCE AND ACCURACY OF LOCATION.
16. WATER MAIN LINES SHALL BE DIMENSIONED OFF THE BACK OF CURB OR EDGE OF PAVEMENT IF NO CURB IS PRESENT. WATER MAIN LINE MATERIAL, SIZE, LENGTH AND DEPTH PLACED SHALL ALSO BE NOTED. THIS INFORMATION TO CLEARLY INDICATE IT AS BEING "AS-BUILT" INFORMATION.
17. WATER VALVES, TEES, ALL SERVICES, BLOW – OFFS AND FIRE HYDRANTS SHALL BE LOCATED BY TYING THEM TO SANITARY SEWER MANHOLES. STATIONING AND OFFSET DISTANCES SHALL BE MEASURED FROM DOWNSTREAM MANHOLES TO UPSTREAM MANHOLES.

THE FOLLOWING INFORMATION IS GENERAL REQUIREMENTS OF ALL "AS-BUILT" DRAWINGS:

18. FOR PERPENDICULAR CROSSINGS OF STORM WATER, SANITARY SEWER, POTABLE WATER, OR RECLAIMED WATER, THE "AS-BUILT" PLANS SHALL CLEARLY INDICATE WHICH UTILITIES ARE LOCATED OVER OR UNDER OTHER UTILITIES, AS NECESSARY.
19. WHEN STORM WATER, POTABLE WATER, RECLAIMED WATER, OR SANITARY SEWER IMPROVEMENTS ARE LOCATED WITHIN AN EASEMENT, THE "AS-BUILT" SHALL ACCURATELY DEPICT THE LOCATION OF THE EASEMENT ITSELF AS WELL AS THE EXACT LOCATION OF THE IMPROVEMENTS WITHIN THE EASEMENT. THIS IS REQUIRED IN ORDER TO VERIFY THAT THE IMPROVEMENTS HAVE BEEN PROPERLY LOCATED AND TO ENSURE THAT FUTURE SUBSURFACE EXCAVATION TO PERFORM REMEDIAL REPAIR CAN BE ACCOMPLISHED WITHOUT DISTURBANCE BEYOND THE EASEMENT. SUCH DOCUMENTATION AND THE ASSOCIATED PROPOSED EASEMENT DOCUMENT WITH LEGAL DESCRIPTION SHALL BE SUBMITTED FOR CITY REVIEW AND APPROVAL PRIOR TO RECORDING OF SAID EASEMENT. UPON CITY APPROVAL, THE EASEMENT SHALL BE RECORDED VIA A SEPARATE LEGAL INSTRUMENT AND SHALL NOT BE INCLUDED AS PART OF HOMEOWNER COVENANTS AND RESTRICTIONS.
20. SUBMIT CERTIFIED PAPER PRELIMINARY "AS-BUILT" (24"x36") WITH REQUEST FOR FINAL INSPECTION. SUBMIT 3 SETS SHOWING WATER FACILITIES, 3 SETS WITH SEWER FACILITIES, AND 3 SETS WITH PAVING AND DRAINAGE FACILITIES. FOLLOWING FINAL INSPECTION AND COMMENTS, THE CONTRACTOR SHALL REVISE AS-BUILTS TO ADDRESS CITY COMMENTS AND SUBMIT 3 SETS CERTIFIED FINAL "AS-BUILTS" ALONG WITH 1 SET CERTIFIED MYLARS AND 1 CD-ROM CONTAINING AUTO-CAD FILES AND PDF VERSIONS SHOWING ALL "AS-BUILT" SHEETS. ALL "AS-BUILT" DRAWINGS SHALL BE CERTIFIED BY A REGISTERED LAND SURVEYOR AND ENGINEER OF RECORD.
21. INDICATE VERTICAL DATUM REFERENCE ON ALL SHEETS.
22. CAD FILE OF "AS-BUILTS" SHALL BE IN STATE PLANE COORDINATES; FILE SHOULD INCLUDE REFERENCE TO PROJECTION. (FLORIDA EAST, NAD83)
23. ALL "AS-BUILT" DRAWINGS SHALL BE PREPARED BY A FLORIDA REGISTERED LAND SURVEYOR USING THE FINAL APPROVED SITE DESIGN PREPARED BY THE ENGINEER OF RECORD. LINE WEIGHTS, LINETYPES, AND ANNOTATION SHALL BE MANAGED IN A MANNER THAT CLEARLY DISTINGUISHES DESIGN INFORMATION FROM "AS-BUILT" INFORMATION.
24. ALL "AS-BUILT" SHEETS SHALL INCLUDE A TITLE BLOCK AND CLEARLY STATE PROJECT NAME, PROJECT SURVEYOR, DATE OF FIELD WORK, AS WELL AS PROJECT CERTIFICATION BLOCK FROM THE ENGINEER OF RECORD.

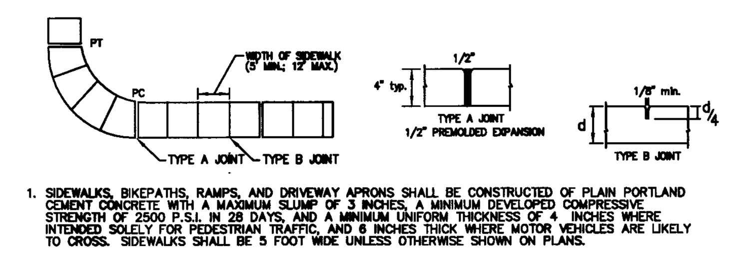
NOTE: REFERENCES TO WATER SHALL MEAN BOTH POTABLE AND RECLAIMED WATER.

STANDARD CONSTRUCTION DETAIL
REQUIREMENTS FOR AS BUILT DRAWINGS
INDEX M–1B
MARCH 2014

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ORMOND BEACH'S LAND DEVELOPMENT CODE REQUIREMENTS, AND THE STANDARD CONSTRUCTION DETAILS AND CONSTRUCTION SPECIFICATIONS (SCDCS). AN ENGINEERING PERMIT AND TREE REMOVAL PERMIT IS REQUIRED PRIOR TO STARTING CONSTRUCTION.
2. NO LAND SHALL BE CLEARED, EXCAVATED OR FILLED AND NO STRUCTURE SHALL BE ERECTED, REPAIRED OR DEMOLISHED WITHOUT PROPER PERMIT(S) AS REQUIRED BY THE CITY OF ORMOND BEACH.
3. NOTIFY THE CITY OF ORMOND BEACH'S ENGINEERING DIVISION AT 676-3269 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
4. ANY CONSTRUCTION CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO THE CITY OF ORMOND BEACH FOR APPROVAL PRIOR TO PERFORMING THE WORK.
5. ROAD CONSTRUCTION AND PIPE INSTALLATION COMPACTION AND DENSITY TESTING SHALL CONFORM TO THE CITY OF ORMOND BEACH'S MINIMUM REQUIREMENTS. CERTIFIED COPIES OF TEST REPORTS SHALL BE SUBMITTED TO THE CITY INSPECTOR AND THE CITY'S ENGINEERING DIVISION.
6. A PRE-PAVING UTILITY INSPECTION MUST BE REQUESTED AND COMPLETED PRIOR TO THE PAVING OF ALL ROADS, STREETS, AND PARKING AREAS.
7. A FINAL INSPECTION, TO BE CONDUCTED BY THE CITY OF ORMOND BEACH, SHALL BE PERFORMED ON ALL CONSTRUCTION. THE DESIGN ENGINEER SHALL NOTIFY THE CITY OF ORMOND BEACH'S ENGINEERING DIVISION 676-3269 WHEN REQUESTING A FINAL INSPECTION.
8. THREE COMPLETE SETS OF AS-BUILT DRAWINGS (5 FOR SUBDIVISIONS) ARE REQUIRED TO BE SUBMITTED TO THE CITY OF ORMOND BEACH PRIOR TO REQUESTING A FINAL INSPECTION.
9. THE CITY HAS A CONTRACTOR FOR ROLL OFF SERVICE. NO OTHER CONTRACTOR SHALL BE PERMITTED TO PROVIDE THIS SERVICE. VERIFY COMPANY UNDER CONTRACT WITH THE CITY.
10. CONSTRUCTION SITES THAT DISTURB ONE ACRE OR MORE WILL BE REQUIRED TO SEEK COVERAGE UNDER THE GENERIC PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES. IN ACCORDANCE WITH THIS REQUIREMENT, A STORM WATER POLLUTION PREVENTION PLAN (SWPP) MUST BE SUBMITTED TO THE CITY'S ENGINEERING DIVISION PRIOR TO CONSTRUCTION TO BE IN COMPLIANCE WITH THE PERMIT.
11. CONTRACTOR WILL FOLLOW REQUIRED WASTE MANAGEMENT PRACTICES
12. SEEDING OR SODDING SHALL BE INITIATED FOR EROSION AND SEDIMENT CONTROL ON DISTURBED AREAS AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.
13. ANY FIELD MODIFICATIONS OR DEVIATIONS TO THIS CONSTRUCTION PLAN REQUIRES WRITTEN APPROVAL BY BOTH THE ENGINEER OF RECORD AND THE CITY OF ORMOND BEACH ENGINEERING DIVISION.

STANDARD CONSTRUCTION DETAIL
GENERAL CONSTRUCTION NOTES
INDEX M–2
MARCH 2014




1. SIDEWALKS, BIKEPATHS, RAMPS, AND DRIVEWAY APRONS SHALL BE CONSTRUCTED OF PLAIN PORTLAND CEMENT CONCRETE WITH A MAXIMUM SLUMP OF 3 INCHES, A MINIMUM DEVELOPED COMPRESSIVE STRENGTH OF 2500 P.S.I. IN 28 DAYS, AND A MINIMUM UNIFORM THICKNESS OF 4 INCHES WHERE INTENDED SOLELY FOR PEDESTRIAN TRAFFIC, AND 6 INCHES THICK WHERE MOTOR VEHICLES ARE LIKELY TO CROSS. SIDEWALKS SHALL BE 5 FOOT WIDE UNLESS OTHERWISE SHOWN ON PLANS.
2. SIDEWALKS AND BIKE PATHS SHALL BE PLACED PARALLEL TO, AND ONE FOOT WITHIN THE RIGHT-OF-WAY LINE EXCEPT THAT THE CITY MAY APPROVE DEVIATIONS TO SAVE SPECIMEN TREES PROVIDED THAT THE PAVEMENT REMAINS WITHIN THE RIGHT-OF-WAY, IS NOT DIMINISHED IN WIDTH, AND REMAINS AT LEAST 4 FEET FROM THE EDGE OF THE STREET PAVEMENT, UNLESS OTHERWISE APPROVED BY THE CITY.
3. THE TOP OF THE CONCRETE SHALL BE AT AN ELEVATION NO LOWER THAN THE CROWN OF THE ADJACENT ROADWAY, AND NO HIGHER THAN 6 INCHES ABOVE THE CROWN UNLESS APPROVED BY THE CITY TO MAKE A MORE NATURAL TRANSITION WITH THE ADJACENT LAND.
4. ALL WALKS SHALL HAVE A CROSS SLOPE OF 1/4 INCH PER FOOT AND SHALL NOT EXCEED A LONGITUDINAL SLOPE OF 1:20, EXCEPT AT DESIGNATED RAMPS THAT SHALL NOT EXCEED 1:12. PROVIDE A TACTIBLE WARNING SURFACE AT ALL RAMPS PER A.D.A. THE CONTRACTOR SHALL INSURE THAT ALL PROVISIONS OF A.D.A AND FLORIDA ACCESSIBILITY CODE ARE MET.*
5. ISOLATION JOINTS (TYPE A JOINTS) SHALL BE PROVIDED BETWEEN EXISTING SLABS OR STRUCTURES AND FRESH CONCRETE, TO SEPARATE PEDESTRIAN SECTIONS FROM SECTIONS WHICH WILL ENCOUNTER VEHICLE TRAFFIC, TO SEPARATE FRESH PLACEMENT FROM CONCRETE WHICH HAS SET FOR MORE THAN 60 MINUTES, AND NO FARTHER APART THAN 100 FEET IN SIDEWALKS AND BIKEPATHS. JOINT MATERIAL SHALL BE SPECIFIED IN FDOT STANDARDS AND SPECIFICATIONS AND SHALL BE RUBBER, PLASTIC OR OTHER APPROVED NON-BIODEGRADABLE ELASTOMERIC MATERIAL. WOOD IS PROHIBITED.
6. CONTROL JOINTS (TYPE B JOINTS) SHALL BE TOOLED INTO THE FRESH CONCRETE TO A DEPTH EQUAL TO 1/4 THE SLAB THICKNESS AND SPACED APART A DISTANCE EQUAL TO THE WIDTH OF THE SLAB, AT MINIMUM SPACING OF 5', MAX SPACING OF 12'.
7. THE SLAB SURFACE SHALL BE BROOM FINISHED TO BE SLIP RESISTANT, AND SHALL MATCH AS CLOSELY AS POSSIBLE THE FINISH OF THE EXISTING ADJACENT SLABS AND ALL EDGES SHALL BE TOOLED TO ELIMINATE SHARP CORNERS.
8. THE BEARING SUBSURFACE SHALL HAVE ALL ORGANIC, LOOSE, AND DELETERIOUS MATTER REMOVED, AND THE REMAINING CLEAN SOIL SHALL BE SMOOTH, SOUND, AND SOLID. ANY FILL MATERIAL SHALL BE COMPACTED WITH A VIBRATORY OR IMPACT COMPACTION MACHINE IN MAXIMUM 12 INCH LIFTS OR COMPACTED WITH A HAND TAMPER IN MAXIMUM 4 INCH LIFTS. THE CITY SHALL REQUIRE A COMPACTION TEST FOR EACH LIFT IF THE TOTAL FILLED SECTION IS MORE THAN 12 INCHES DEEP OR IF THE SUBSURFACE HAS BEEN DISTURBED MORE THAN 12 INCHES DEEP. WHERE SUCH TEST IS REQUIRED, THE RESULTS SHALL SHOW A MINIMUM PROCTOR FIELD DENSITY OF 95 PERCENT.
9. ALL CONCRETE WORK IN THE RIGHT-OF-WAY SHALL BE INSPECTED BY THE CITY AFTER THE SUBSOIL IS PREPARED AND THE FORMS ARE SET, BUT BEFORE THE CONCRETE PLACEMENT BEGINS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE FINISHED SLAB FROM ALL DAMAGE AND VANDALISM UNTIL THE CITY ACCEPTS OR APPROVES THE SLAB, AFTER WHICH TIME THE OWNER OF THE ABUTTING LAND SHALL BE RESPONSIBLE FOR THE SLAB IN ACCORDANCE WITH THE CITY CODE. ANY SLAB SECTION DAMAGED OR VANDALIZED PRIOR TO ACCEPTANCE OR APPROVAL SHALL BE CUT OUT BETWEEN JOINTS AND REPLACED. REPAIRS ARE NOT ACCEPTABLE.
11. SIDEWALKS LOCATED WITHIN THE RIGHT-OF-WAY SHALL NOT BE TINTED, STAINED, COLORED, OR COATED.
12. ALL FORMS SHALL BE REMOVED PRIOR TO ACCEPTANCE OR APPROVAL AND THE DISTURBED GROUND SHALL BE BACKFILLED, REGRADED, AND SODDED SO THAT THE WEAR SURFACE OF THE CONCRETE IS REASONABLY FLUSH WITH THE ADJACENT GRADE.

STANDARD CONSTRUCTION DETAIL
SIDEWALK, RAMP, AND DRIVEWAY APRON CONSTRUCTION REQUIREMENTS
NTS
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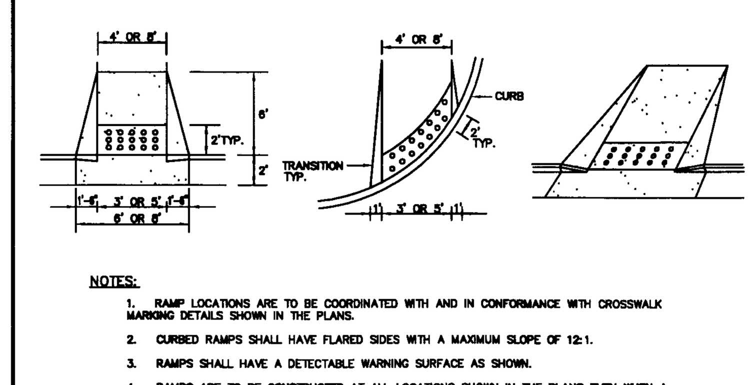
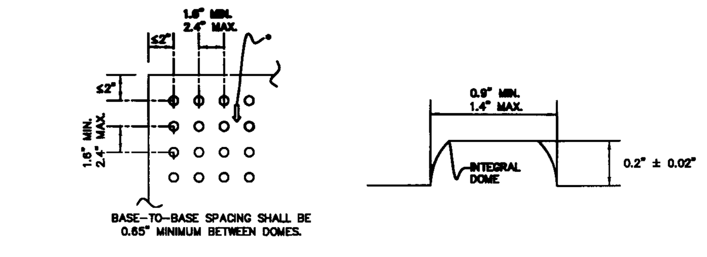
JAN. 2012




NOTES:

1. RAMP LOCATIONS ARE TO BE COORDINATED WITH AND IN CONFORMANCE WITH CROSSWALK MARKING DETAILS SHOWN IN THE PLANS.
2. CURBED RAMPS SHALL HAVE FLARED SIDES WITH A MAXIMUM SLOPE OF 12:1.
3. RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE AS SHOWN.
4. RAMPS ARE TO BE CONSTRUCTED AT ALL LOCATIONS SHOWN IN THE PLANS EVEN WHEN A SIDEWALK IS NOT CONSTRUCTED CONCURRENTLY.
5. NO CURB TRANSITION IS NEEDED FOR MIAMI CURBS.
6. ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FDOT INDEX NO. 304 AND HANDICAPPED ACCESSIBILITY REQUIREMENTS IN ACCORDANCE WITH THE AMERICAN DISABILITIES ACT.




NOTES:

* ON RAMPS THAT ARE PERPENDICULAR WITH THE CURB LINE, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL. ON RAMPS INTERSECTING CURBS ON A RADIUS, THE DOME PATTERN SHALL BE IN-LINE WITH THE DIRECTION OF TRAVEL TO THE EXTENT PRACTICAL.

STANDARD CONSTRUCTION DETAIL
SIDEWALK AND BIKE PATH RAMP
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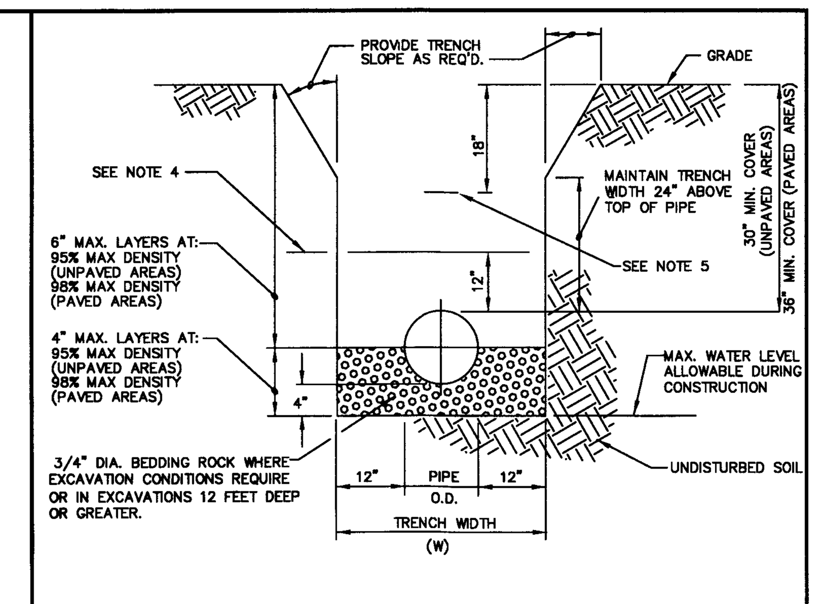


PIPE INSTALLATION DETAIL

NOTES:

1. WHERE SOIL CONDITIONS CAN NOT BE MAINTAINED AS SHOWN ABOVE, PROVIDE APPROVED METHOD OF CONSTRUCTION.
2. SHEETING WILL BE REQUIRED AS DETERMINED IN THE FIELD.
3. COMPACTION PERCENTAGES SHOWN REFER TO A.A.S.H.T.O. T-180. PROVIDE COPIES OF CERTIFIED TEST REPORTS TO CITY INSPECTOR.
4. MECHANICAL COMPACTION NOT ALLOWED BELOW THIS LEVEL.
5. INSTALL METALLIC TAPE OVER FULL LENGTH OF PIPE.

STANDARD CONSTRUCTION DETAIL
PIPE INSTALLATION
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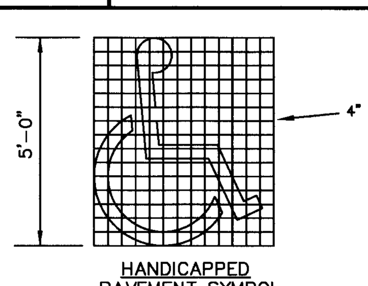
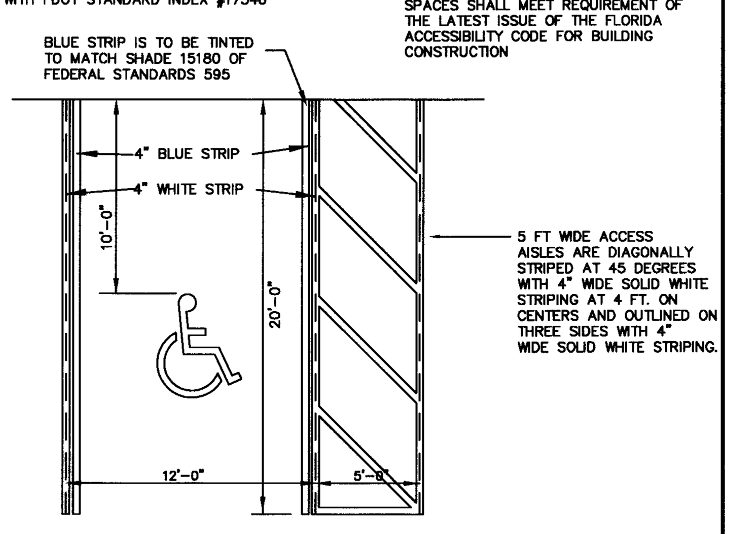



NOTES:
1. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ALL DIRECTIONS.
2. IF ACCESSIBLE AISLE CROSSES THE TOP OF THE HANDICAP SPACE, WHEEL STOP SHALL BE USED TO MAINTAIN MINIMUM 44 INCH CLEAR ACCESSIBLE ROUTE.
3. IF WHEEL STOP IS USED, PARKING SHALL HAVE 18' CLEAR SPACE.
4. ACCESSIBLE PARKING SIGN SHALL BE PLACED AS TO NOT ENCROACH INTO THE ACCESSIBLE AISLE MINIMUM 44 INCH CLEAR ACCESSIBLE ROUTE.
5. NUMBER OF ACCESSIBLE PARKING SPACES SHALL MEET REQUIREMENT OF THE LATEST ISSUE OF THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION

USE OF PAVEMENT SYMBOL IN HANDICAPPED PARKING SPACES IS REQUIRED. WHEN USED THE SYMBOL SHALL BE 5 FT. HIGH AND WHITE IN COLOR. TO BE INSTALLED IN ACCORDANCE WITH FDOT STANDARD INDEX #17346




STANDARD CONSTRUCTION DETAIL
TYPICAL MARKINGS FOR HANDICAPPED PARKING
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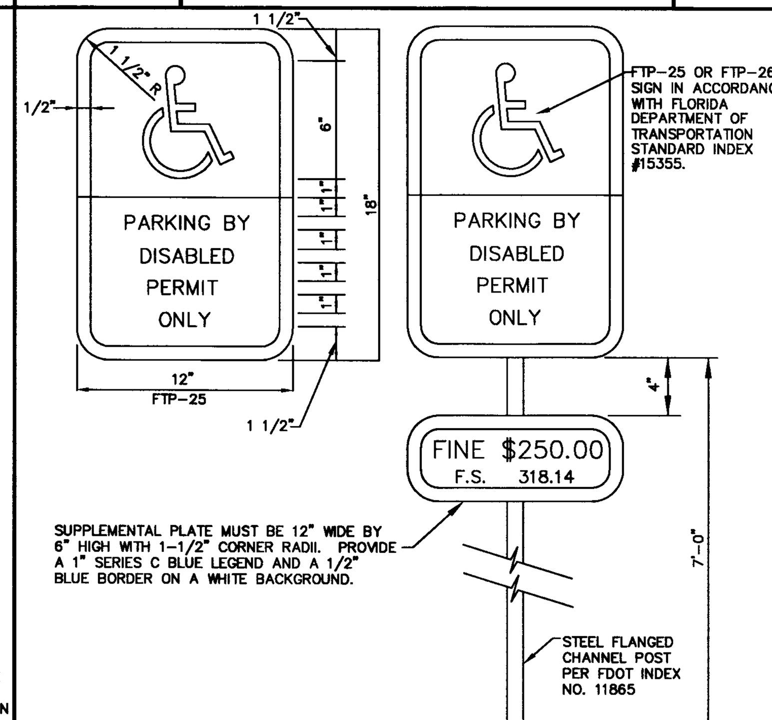


1.) TOP PORTION OF SIGN TO HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.

2.) BOTTOM PORTION SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.

3.) SIGN MAY BE FABRICATED ON ONE PANEL OR TWO.

4.) SIGNS ARE TO BE MOUNTED AT STANDARD HEIGHT. (7' FROM PAVEMENT TO BOTTOM OF SIGN.)

STANDARD CONSTRUCTION DETAIL
HANDICAP PARKING SIGN DETAIL
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MARCH 2014

ES BMP 1.01

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE

DEFINITION

A STONE STABILIZED PAD LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS ON A CONSTRUCTION SITE.

PURPOSE

TO REDUCE THE AMOUNT OF SEDIMENT TRANSPORTED ONTO PUBLIC ROADS BY MOTOR VEHICLES OR RUNOFF.

CONDITIONS WHERE PRACTICE APPLIES

WHEREVER TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVES DIRECTLY ONTO A PUBLIC ROAD OR OTHER PAVED AREA.

PLANNING CONSIDERATIONS

CONSTRUCTION ENTRANCES PROVIDE AN AREA WHERE MUD CAN BE REMOVED FROM CONSTRUCTION VEHICLE TIRES BEFORE THE ENTER A PUBLIC ROAD. IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL PAD IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF THE MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLE ENTERS A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE. CONSTRUCTION ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZATION OF CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY CONSTRUCTION VEHICLES.

DESIGN CRITERIA

AGGREGATE SIZE

FDOT AGGREGATE NO. 1 (1.5 – 3.5 INCH STONE) SHOULD BE USED.

ENTRANCE DIMENSIONS

AGGREGATE LAYER MUST BE AT LEAST 6 INCHES THICK. IT MUST EXTEND THE FULL WIDTH OF THE VEHICULAR INGRESS AND EGRESS AREA. THE LENGTH OF THE ENTRANCE MUST BE AT LEAST 50 FEET. (SEE DETAIL).

WASHING

IF CONDITIONS OF THE SITE ARE SUCH THAT THE MAJORITY OF THE MUD IS NOT REMOVED BY THE VEHICLES TRAVELING OVER THE GRAVEL, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING A PUBLIC ROAD. WASH WATER MUST BE CARRIED AWAY FROM THE ENTRANCE TO A SETTLING AREA TO REMOVE SEDIMENT. A WASH RACK MAY ALSO BE USED TO MAKE WASHING MORE CONVENIENT AND EFFECTIVE. SEE DETAIL.

LOCATION

THE ENTRANCE SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.

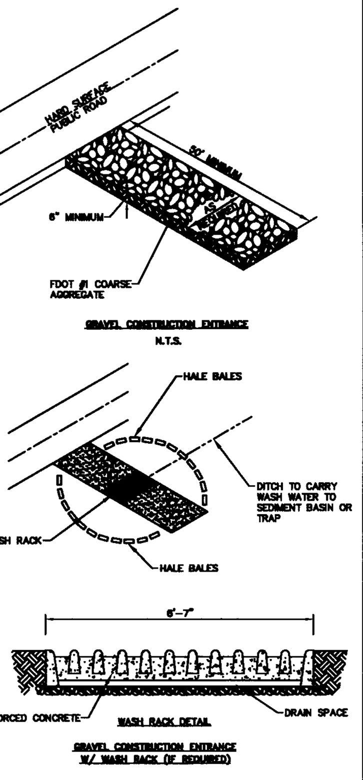
INDICATE PROPOSED LOCATION OF GRAVEL CONSTRUCTION ENTRANCE ON THE GRADING PLAN.

CONSTRUCTION SPECIFICATIONS

THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL. THE GRAVEL SHALL BE PLACED TO THE SPECIFIED DIMENSIONS. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS. IF WASH RACKS ARE USED, THEY SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS. IF WASH RACKS ARE TO MANUFACTURER'S SPECIFICATIONS.

MAINTENANCE

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE, AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.




NOTE: COMPLY WITH FDOT REQUIREMENTS FOR SOIL TRACKING PREVENTION DEVICE IN FDOT ROADWAY ROW (INDEX NO. 106)

STANDARD CONSTRUCTION DETAIL
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
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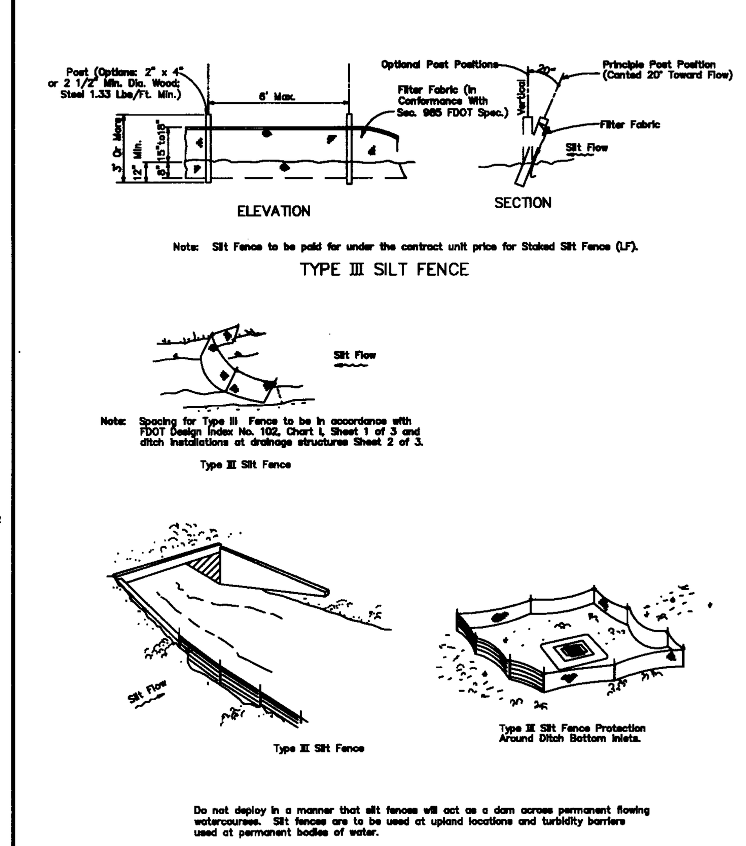


SILT FENCE APPLICATIONS

STANDARD CONSTRUCTION DETAIL
EROSION CONTROL – SILT FENCE
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CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

THE FOLLOWING MEASURES REPRESENT MINIMUM STANDARDS TO BE ADHERED TO BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION OF A PROJECT. THE CITY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO BE EMPLOYED WHEN WARRANTED BY EXTREME CONDITIONS AND/OR THE FAILURE OF THE CONTRACTOR TO EMPLOY THE APPROPRIATE EROSION CONTROL BEST MANAGEMENT PRACTICES. FAILURE TO COMPLY WITH THESE PROVISIONS SHALL RESULT IN THE ISSUANCE OF A "STOP WORK ORDER".

1. NO DISTURBANCE OF PROPOSED CONSERVATION EASEMENTS, NATURAL BUFFERS, OR WATER BODIES IS PERMITTED. THE CONTRACTOR SHALL LOCATE THESE AREAS ON SITE AND BARRICADE THEM TO AVOID ANY UNAUTHORIZED CLEARING. BARRICADES AND OTHER PROTECTIVE FENCING ARE TO BE LOCATED AT THE DRIP LINE OF EXISTING NATIVE TREES OR AT THE EDGE OF THE NATIVE UNDER- STORY HABITAT, WHICHEVER IS NEAREST TO THE CONSTRUCTION ACTIVITY.
2. SPECIMEN AND HISTORIC TREES, CONSERVATION EASEMENTS, NATURAL VEGETATION BUFFERS, AND SIMILAR AREAS MUST BE PROTECTED BY BARRICADES OR FENCING PRIOR TO CLEARING. BARRICADES ARE TO BE SET AT THE DRIP LINE OF THE TREES AND MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. BARBED WIRE IS NOT PERMITTED AS A PROTECTIVE BARRIER.
3. WHERE A CHANGE OF GRADE OCCURS AT THE DRIP LINE OF A SPECIMEN TREE, SILT FENCES WILL BE REQUIRED DURING CONSTRUCTION AND RETAINING WALLS MUST BE INSTALLED PRIOR TO FINAL ACCEPTANCE BY THE CITY.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL PROTECTIVE VEGETATION BARRICADES AND EROSION CONTROL STRUCTURES AND MEASURES IN PLACE PRIOR TO THE COMMENCEMENT OF ANY EARTHWORK, INCLUDING PRELIMINARY GRUBBING. THESE MEASURES INCLUDE, BUT ARE NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCES, SYNTHETIC JUTE BALES, WATTLES, &/OR HAVE BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED, SILT FENCES, AND FLOATING TURBIDITY BARRIERS. FURTHER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL EROSION CONTROL DEVICES THROUGHOUT THE DURATION OF THE ENTIRE PROJECT. MAINTENANCE SHALL INCLUDE PERIODIC INSPECTION AND REMOVAL OF DEBRIS ABUTTING EROSION CONTROL DEVICES.
5. PRIOR TO THE INSTALLATION OF ANY FILL MATERIALS ON SUBJECT SITE, SILT FENCES SHALL BE INSTALLED (1) ALONG SUBJECT SITE BOUNDARY AND PROPERTY LINES, (2) AT THE EDGE OF CONSERVATION EASEMENTS AND WETLANDS, (3) ADJACENT TO NATURAL LANDSCAPE BUFFERS, (4) AROUND THE PERIMETER OF EXISTING STORM WATER TREATMENT FACILITIES, AND (5) AT ANY ADDITIONAL AREAS THAT THE CITY DEEMS NECESSARY TO BE PROTECTED FROM POTENTIAL EROSION IMPACTS DURING CONSTRUCTION. THESE CONDITIONS SHALL APPLY IN ALL INSTANCES WHERE FILL MATERIAL IS BEING INSTALLED WITHIN 25 FEET OF ANY OF THE AFOREMENTIONED LOCATIONS. WHILE THESE ITEMS REPRESENT THE MINIMUM REQUIREMENTS, THE CITY RESERVES THE RIGHT TO IMPOSE ADDITIONAL PROTECTIVE MEASURES, AS DETERMINED DURING ACTUAL SITE VISITS CONDUCTED AS PART OF THE STANDARD REVIEW OF THE SITE THROUGHOUT PROJECT CONSTRUCTION.
6. AT A MINIMUM, THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS. SUFFICIENT GRASS COVERAGE IS TO BE ESTABLISHED WITHIN TWO WEEKS.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGH SCHEDULING, TO MINIMIZE THE DISTURBANCE OF SITE AREAS THAT HAVE BEEN BROUGHT TO THEIR PROPOSED FINAL GRADE. WITHIN SEVEN (7) DAYS OF BRINGING A SUBJECT AREA TO ITS FINAL GRADE OR INACTIVITY IN CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SEED AND MULCH OR SOD, AS REQUIRED. ANY PROJECT THAT IS INACTIVE FOR A PERIOD OF 30 DAYS OR MORE SHALL BE STABILIZED TO THE SATISFACTION OF THE CITY OF ORMOND BEACH
8. ONCE AN AREA IS SEEDED OR SODDED, IT MUST BE MAINTAINED BY THE CONTRACTOR TO ALLOW THE GRASS TO BECOME ESTABLISHED. IF THE GRASS IS NOT ESTABLISHED WITHIN TWO WEEKS THE CITY MAY REQUIRE THE CONTRACTOR TO RE-SEED OR A NON-VEGETATIVE OPTION MAY BE EMPLOYED.

A. 9. ABSOLUTELY NO BURYING OF CLEARED MATERIALS IS PERMITTED.

STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES
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MARCH 2014

CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES

10. THE REMOVAL OF ALL VEGETATION AND TOPSOIL ON THE FUTURE ROADWAY, PARKING AND BUILDING LOT AREAS IS REQUIRED TO BE COMPLETED PRIOR TO THE PLACEMENT OF FILL ON THOSE AREAS. THE TOPSOIL MAY BE TEMPORARILY STOCKPILED AND USED AS TOPSOIL OVER OVER PROPOSED GREEN AREAS SUCH AS PLANT BEDS, SODDED AREAS, AND WHERE TREES ARE TO BE INSTALLED OR RELOCATED.
11. A SIGNED, DATED, AND SEALED LETTER FROM A SOILS ENGINEER OR THE ENGINEER OF RECORD CERTIFYING THAT THE AREAS TO BE FILLED HAVE BEEN STRIPPED OF ORGANIC MATERIALS, MUST BE SUBMITTED TO THE CITY PRIOR TO FILLING.
10. FILL MATERIAL IS TO BE PLACED IN ONE FOOT LIFTS AND COMPACTED TO THE APPROPRIATE DENSITY (98% FOR PAVED AREAS AND 95% FOR BUILDING PADS AND ALL OTHER AREAS AS PER AASHTO T-180).
11. DURING SUBDIVISION DEVELOPMENT WHEN FUTURE BUILDING LOTS ARE FILLED AS PART OF THE OVERALL SUBDIVISION IMPROVEMENTS, COMPACTION TEST REPORTS MUST BE PERFORMED ON THE BUILDING LOTS AT 300 FOOT INTERVALS. THESE TESTS ARE TO BE PERFORMED IN ONE-FOOT VERTICAL INCREMENTS. THE RESULTS OF THESE TESTS ARE TO BE SUBMITTED TO THE CITY UPON COMPLETION OF THE TESTS.
12. IF ANY MUCK MATERIAL IS DISCOVERED, IT SHALL BE REQUIRED TO BE REMOVED AND REPLACED WITH A SUITABLE MATERIAL THAT IS PROPERLY BACKFILLED, COMPACTED AND TESTED USING AASHTO T-180 MODIFIED PROCTOR METHOD.
13. STOCKPILING IS NOT GENERALLY PERMITTED BY THE CITY. WHEN ALLOWED, STOCKPILES SHALL NOT EXCEED SIX FEET IN HEIGHT MEASURED FROM THE ORIGINAL GRADE. AT A MINIMUM, STOCK PILES THAT WILL REMAIN IN PLACE IN EXCESS OF TWENTY DAYS SHOULD BE SEEDED AND MULCHED IMMEDIATELY UPON PLACEMENT OF THE FINAL LIFT.
14. SOILS ARE TO BE STABILIZED BY WATER OR OTHER MEANS DURING CONSTRUCTION. THIS IS INTENDED TO REDUCE SOIL EROSION AND THE IMPACT TO NEIGHBORING COMMUNITIES. ADEQUATE WATERING METHODS SHOULD BE EMPLOYED TO ALLOW DAILY COVERAGE OF THE ENTIRE LIMITS OF ALL AREAS THAT DO NOT HAVE AN ESTABLISHED VEGETATIVE COVER. METHODS TO BE EMPLOYED INCLUDE, BUT ARE NOT LIMITED TO, WATER TRUCKS, PERMANENT IRRIGATION SYSTEMS, TEMPORARY SPRINKLER SYSTEMS OPERATED BY PUMPING UNITS CONNECTED TO WET RETENTION PONDS, WATER CANNONS, TEMPORARY IRRIGATION SYSTEMS MOUNTED ATOP STOCKPILE AREAS, AND OTHER METHODS AS DEEMED NECESSARY BY THE CITY.
15. ALL FILL MATERIALS LOCATED BENEATH STRUCTURES AND PAVEMENT SHALL CONSIST OF CLEAN GRANULAR SAND FREE FROM ORGANICS AND SIMILAR MATERIAL THAT COULD DECOMPOSE.
16. ALL FILL TO BE PLACED IN LANDSCAPED AREAS SHALL HAVE A Ph RANGE BETWEEN 5.5 AND 7.5, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISTING SOILS.
17. OWNER SHALL FILE A "NOTICE OF INTENT TO USE GENERIC PERMIT FOR STORM WATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES" WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS REQUIRED BY DEP. CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH ALL PROVISIONS OF THE GENERIC PERMIT INCLUDING BUT NOT LIMITED TO:
    A. PROVIDE SUCH EROSION AND SEDIMENT CONTROL MEASURES AS MAY BE NECESSARY TO PREVENT DISCHARGE OF POLLUTANTS FROM THE SITE FROM THE START OF CONSTRUCTION UNTIL THE FINAL GROUND COVER HAS BEEN ESTABLISHED.
    B. EMPLOY A DEP CERTIFIED INSPECTOR TO MAKE WEEKLY INSPECTIONS / REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES.
    C. EMPLOY A DEP CERTIFIED INSPECTOR TO MAKE INSPECTIONS / REPORTS OF THE CONDITION OF EROSION AND SEDIMENT CONTROL MEASURES WITHIN 24 HOURS OF EVERY RAINFALL EVENT EXCEEDING ONE-HALF INCH.
    D. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION.
    E. ADD EROSION AND SEDIMENT CONTROL MEASURES AS SITE CONDITIONS CHANGE.

STANDARD CONSTRUCTION DETAIL
CONTRACTOR REQUIREMENTS FOR SITE CLEARING, GRADING, AND EROSION CONTROL DESIGN AND CONSTRUCTION NOTES
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MARCH 2014

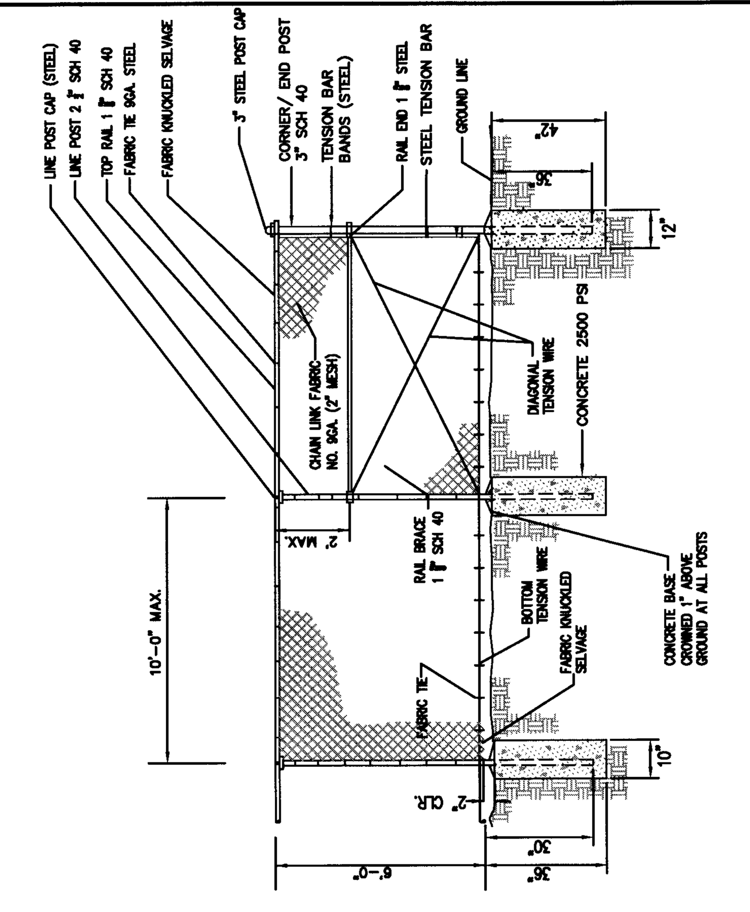
ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE No. EB5479
880 AIRPORT ROAD, SUITE 113
ORMOND BEACH, FL 32174
TEL: (386) 673-7640
FAX: (386) 673-3927

146 N. ORCHARD ST
RV/TRAILER STORAGE
ORMOND BEACH, FL
DETAILS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MRZ |

| DESIGNER | FILE | DATE |
|---|---|---|
| KAB | 1214.1 | 5-13-2013 |
| DRAWN BY | PROJECT | SCALE |
| CTB | 1214-1 | 1:20 |

KIMBERLY ANN BUCK LICENSE No 38565 STATE OF FLORIDA PROFESSIONAL ENGINEER
KIMBERLY A. BUCK, P.E. #38565
NOT VALID UNLESS SIGNED & SEALED




**STANDARD CONSTRUCTION DETAIL**
**6' HIGH CHAIN LINK FENCE DETAIL**
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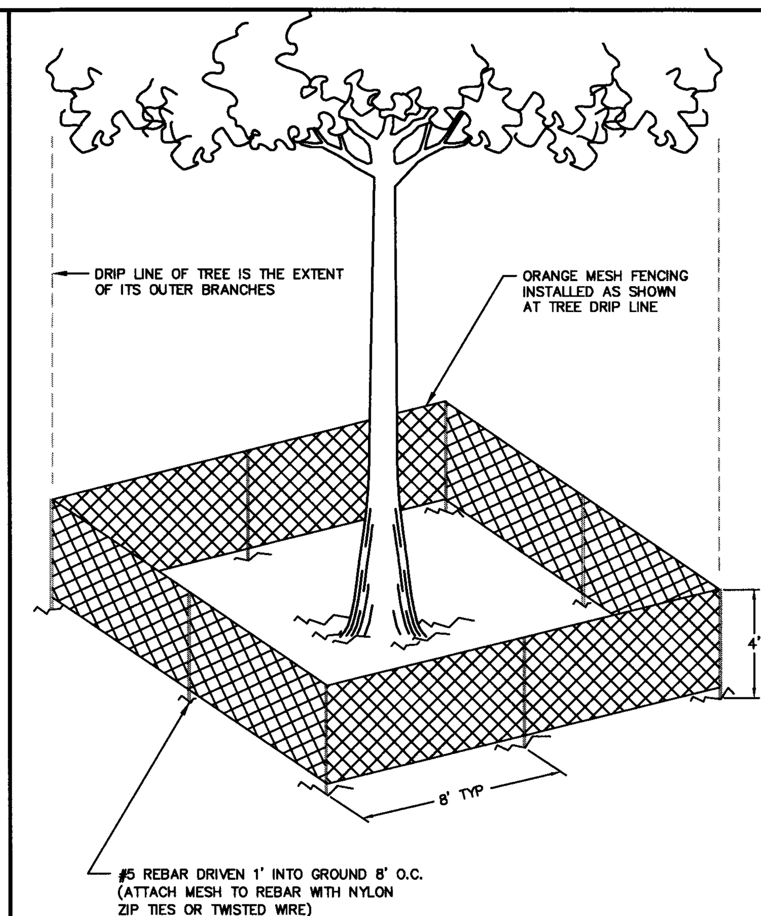


**STANDARD CONSTRUCTION DETAIL**
**TREE BARRICADE**
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## ROADWAY CONSTRUCTION NOTES

1. ALL RIGHT OF WAY OTHER THAN ROADWAY AREAS SHALL BE SEEDED AND MULCHED OR SODDED. ALL SLOPES GREATER THAN 6% SHALL BE SODDED. THE CITY RESERVES THE RIGHT TO REQUIRE SODDING IN SPECIAL AREAS WHERE EROSION IS A CONCERN.
2. THE FOLLOWING WILL BE THE STANDARD PROTECTION FOR DITCHES UNLESS DRAINAGE CALCULATIONS INDICATE OTHERWISE:

| SWALE PROFILE GRADES | PROTECTION REQUIRED |
|---|---|
| 0.2% – 1.0% | SEEDING AND MULCHING |
| 1.0% – 4.0% | SODDING |
| 4.0% AND GREATER | DITCH PAVING |

3. ALL FRANCHISE UTILITY CROSSINGS, INCLUDING BUT NOT LIMITED TO FPL, BELLSOUTH AND CABLE SHALL BE INSTALLED PRIOR TO INSTALLATION AND COMPACTION OF THE ROAD SUB BASE. ANY CROSSINGS AFTER INSTALLATION OF THE SUB BASE SHALL BE BY DIRECTIONAL BORE.
4. THE LIMITS OF STABILIZED SUB BASE SHALL EXTEND TO A DEPTH OF SIX INCHES (6") BELOW THE BOTTOM OF THE BASE AND OUTWARD TO TWELVE INCHES (12") BEYOND THE CURB.
5. THE STABILIZING MATERIAL, IF REQUIRED, SHOULD BE A HIGH BEARING VALUE SOIL, SAND–CLAY, LIMEROCK, RECYCLED CONCRETE, SHELL OR OTHER MATERIAL AS APPROVED BY THE CITY AND A LICENSED SOILS ENGINEER.
6. THE SUB BASE SHALL BE STABILIZED NOT LESS THAN FORTY (40) POUNDS LIMEROCK BEARING RATIO (LBR). A COMPACTION OF NO LESS THAN NINETY–EIGHT (98%) PERCENT DENSITY BASED ON AASHTO T–180 SHALL BE REQUIRED.
7. TESTS FOR SUB BASE BEARING CAPACITY AND COMPACTION SHALL BE DONE AT A MINIMUM OF EVERY 300 FEET AND SHALL BE STAGGERED TO THE LEFT, RIGHT AND AT CENTER LINE OF THE ROADWAY.
8. BASES FOR ALL STREETS SHALL HAVE A MINIMUM SIX INCH (6") DEPTH. PRIMING AND SANDING SHALL BE REQUIRED AS SOON AS BEARING CAPACITY AND COMPACTION HAS BEEN ACHIEVED.
9. MAXIMUM DENSITY BASED ON AASHTO T–180 MODIFIED PROCTOR TEST. RECYCLED CONCRETE OR LIMEROCK BASES SHALL BE COMPACTED TO (98%)
10. MATERIAL DELIVERY TICKETS SHALL BE PROVIDED TO THE CITY AT THE TIME OF PLACEMENT.
11. TESTING OF THE IN–PLACE BASE SHALL BE DONE AT INTERVALS EQUIVALENT TO SUB BASE TESTING AND SHALL CONSIST OF, AS A MINIMUM, MOISTURE CONTENT AND COMPACTION TEST.

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**ROADWAY CONSTRUCTION NOTES**
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12. DESIGN MIXES SHALL BE SUBMITTED TO THE CITY FOR THEIR APPROVAL NO LESS THAN THREE (3) WORKING DAYS PRIOR TO ANY ROADWAY CONSTRUCTION.
13. ASPHALT SPECIFICATIONS SHALL BE SUBMITTED BY THE DESIGN ENGINEER WITH FINAL PLANS TO THE CITY. FLORIDA STATE CERTIFIED BATCH PLANTS MUST THEN CERTIFY THAT THESE APPROVED SPECIFICATIONS HAVE BEEN MET.
14. EXTRACTION AND GRADATION TESTS ON ASPHALT MIXES SHALL BE PROVIDED TO THE CITY TO INSURE THAT DESIGN MIXES MEET THE CITY STANDARD SPECIFICATIONS.
15. THE ROADWAY CROWN SHALL HAVE A STANDARD ONE QUARTER INCH (1/4") PER FOOT SLOPE.
16. ALL ROADWAYS WITH CURB AND GUTTER SECTIONS SHALL HAVE AS A STANDARD A MINIMUM LONGITUDINAL SLOPE OF 0.30%.
17. THE FINISHED PAVEMENT EDGE SHALL BE WITHIN ONE QUARTER INCH (1/4") OF THE ADJACENT CONCRETE CURB.
18. CONCRETE CURBS SHALL BE PROVIDED ON BOTH SIDES OF ALL STREETS AND CONSTRUCTED WITH 2500 PSI CONCRETE AT 28 DAYS.
19. CONCRETE CURBS SHALL BE SAW CUT TO A DEPTH EQUAL TO 1/4 OF CURB THICKNESS AT INTERVALS OF TEN FEET (10') WITH EXPANSION JOINTS AT STREET INTERSECTIONS, STRUCTURES AND ALONG CURVES AT SIXTY FEET (60') INTERVALS. ALL EXPANSION JOINT MATERIAL IS REQUIRED TO BE INSTALLED THROUGH THE ENTIRE DEPTH OF THE CONCRETE CURB.
20. AN "X" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF WATER DISTRIBUTION SYSTEM VALVE.
21. AN "↑" SHALL BE CUT INTO THE CURB TO MARK THE LOCATION OF ALL VALVES OTHER THAN WATER DISTRIBUTION VALVES.
22. A "V" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL SEWER SERVICES.
23. A "⊥" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL RECLAIMED WATER SERVICES.
24. A "Λ" SHALL BE CUT IN THE CURB TO MARK THE LOCATION OF ALL WATER SERVICES.

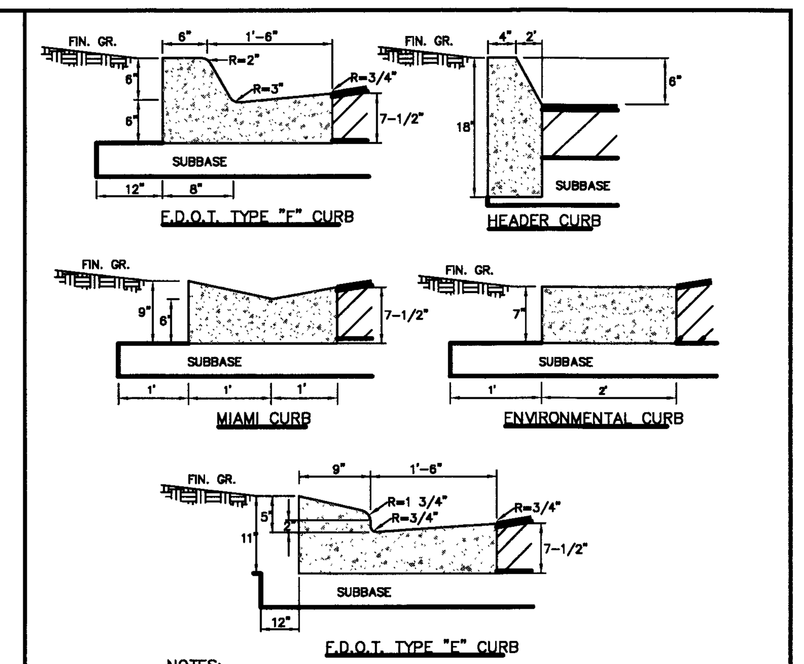
**STANDARD CONSTRUCTION DETAIL**
**ROADWAY CONSTRUCTION NOTES**
INDEX R-1B — MARCH 2014

25. THREE (3) CONCRETE CYLINDERS SHALL BE TAKEN AND TESTED FOR EVERY THREE HUNDRED (300) FEET OF ROADWAY CONSTRUCTED. TEST RESULTS SHALL THEN BE PROVIDED TO THE CITY AS THEY BECOME AVAILABLE.
26. THE DEVELOPER SHALL PROVIDE ALL REQUIRED PAVEMENT MARKINGS ON ALL ROADWAYS PER CITY, COUNTY AND STATE REQUIREMENTS. CENTERLINE STRIPES SHALL BE PROVIDED ON EXTENSIONS OF CITY COLLECTOR OR ARTERIAL ROADS, COUNTY ROADS AND STATE HIGHWAYS ONLY.
27. STOP BARS SHALL BE PLACED AT ALL SUBDIVISION ENTRANCES AND INTERSECTIONS CONTAINING CITY COLLECTOR AND ARTERIAL ROADS, COUNTY ROADS AND STATE HIGHWAYS.
28. ALL TRAFFIC CONTROL DEVICES PLACED AT INTERSECTIONS, PRIVATE STREETS, PUBLIC STREETS, COUNTY ROADS AND STATE HIGHWAYS WITHIN THE CITY LIMITS SHALL BE INSTALLED ACCORDING TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
29. THE DEVELOPER IS RESPONSIBLE FOR PAYING FEES FOR ALL STREET LIGHTS PRIOR TO ACCEPTANCE OF THE PROJECT BY THE CITY.
30. STANDARD TURNING RADII FOR INTERSECTIONS:

| | |
|---|---|
| 2–LANE ACCESS OR FEEDER | 35' |
| LOCAL TO COLLECTOR | 35' |
| LOCAL OR COLLECTOR TO ARTERIAL | 40' |
| ARTERIAL TO ARTERIAL | 50' |

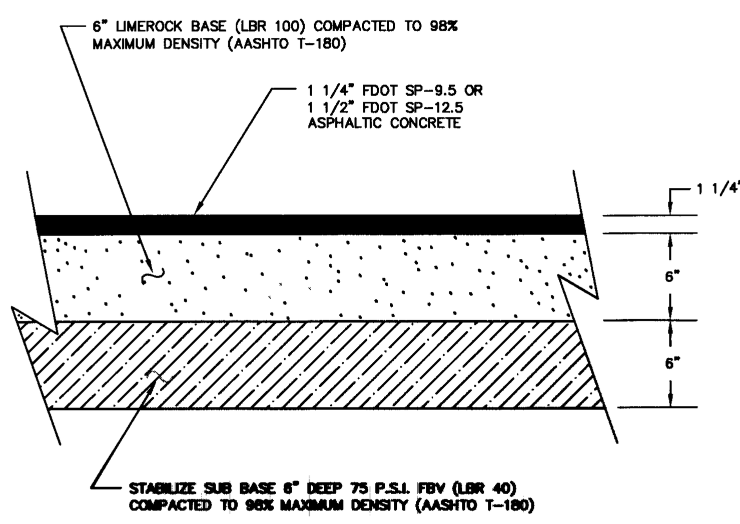
31. CITY INSPECTOR SHALL BE PRESENT DURING PAVING OF ALL PUBLIC AND PRIVATE ROADS. PAVING SHALL BE PERFORMED DURING NORMAL BUSINESS HOURS, MONDAY THROUGH FRIDAY. PAVING DURING WEEKENDS IS NOT PERMITTED.
32. CONSTRUCTION METHODS AND DESIGN FOR CONCRETE PAVEMENT SHALL CONFORM TO FDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
33. ALL CONTRACTORS THAT ARE PERFORMING THE CONSTRUCTION OF PUBLIC IMPROVEMENTS (WATER MAIN, SANITARY SEWER MAIN, RECLAIMED WATER MAIN, STORM WATER PIPES AND INLETS AND ALSO CONSTRUCTION OF ROADWAYS) SHALL BE CERTIFIED WITH THE FLORIDA STATE DEPARTMENT OF PROFESSIONAL REGULATIONS (DPR) FOR THE TYPE OF WORK THAT THEY PERFORM. A COPY OF THE VALID LICENSE IS REQUIRED AT PRE CONSTRUCTION MEETING.
34. UTILITY DEPTH:
   – HIGH VOLTAGE UTILITIES SUCH AS POWER (FEEDER, SERVICE AND DROPS) SHALL BE BURIED A MINIMUM OF 30 INCHES IN DEPTH.
   – LOW VOLTAGE UTILITIES SUCH AS PHONE AND CABLE TV SHALL BE BURIED A MINIMUM OF 12 INCHES IN DEPTH FOR FEEDER AND SERVICES. SERVICE DROPS SHALL BE BURIED A MINIMUM OF 6 INCHES IN DEPTH.
   – HIGH VOLTAGE UTILITIES INSTALLED PARALLEL TO PRESSURE MAINS SHALL MAINTAIN A MINIMUM FIVE FOOT SEPARATION.
35. GEOTECHNICAL TESTING REPORTS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER SHALL BE SUBMITTED TO THE CITY OF ORMOND BEACH PRIOR TO FINAL SIGN OFF. REPORTS SHALL CLEARLY LABEL PROJECT NAME AND PHASE.

**STANDARD CONSTRUCTION DETAIL**
**ROADWAY CONSTRUCTION NOTES**
INDEX R-1C — MARCH 2014




NOTES:
1. ALL CURBS TO BE CONSTRUCTED OF 28 DAY, 2500 P.S.I. CONCRETE
2. 1/2" PRE–MOLDED EXPANSION JOINT REQUIRED EVERY 500', CONSTRUCTION JOINT REQUIRED EVERY 10' MAXIMUM (4' MINIMUM).
3. 1/2" PRE–MOLDED EXPANSION JOINT REQUIRED AT EACH SIDE OF ALL STORM INLET STRUCTURES AND AT ALL RADIUS POINTS.
4. 6" SUBBASE TO BE COMPACTED AND TESTED TO 98% DENSITY WITH MINIMUM L.B.R. 40 BASED ON AASHTO T–180 MODIFIED PROCTOR TEST.
5. EXPANSION JOINT MATERIAL MUST COVER THE ENTIRE CROSS SECTION OF CURB.
6. ALL EXPOSED CORNERS TO BE ROUNDED AT 3/4" MIN. RADIUS.
7. ALL CURB ENDS THAT DO NOT TIE INTO OTHER FACILITIES SHALL TRANSITION DOWN TO PAVEMENT GRADE IN 24 INCHES.

**STANDARD CONSTRUCTION DETAIL**
**STANDARD CURB CONSTRUCTION**
NTS
INDEX R-4 — MARCH 2014




**STANDARD CONSTRUCTION DETAIL**
**STANDARD PAVING DETAIL**
NTS
INDEX R-5 — MARCH 2014

## ROADWAY COMPACTION AND DENSITY TESTING REQUIREMENTS

| ITEM | TEST | FREQUENCY | STANDARD | TEST METHOD |
|---|---|---|---|---|
| ROADWAY SUBBASE (BOTTOM OF SUBBASE DOWN 1 FOOT) | IN–PLACE DENSITY | ONE (1) TEST/300 LF | 95% MODIFIED PROCTOR (ASTM D–1557 OR AASHTO T–180) | ASTM D–2937 D–2922 D–1556 |
| STABILIZED SUBBASE | IN–PLACE DENSITY | ONE (1) TEST/300 LF | 95% MODIFIED PROCTOR (ASTM D–1557 OR AASHTO T–180) | ASTM D–2937 D–2922 D–1556 |
| STABILIZED SUBBASE | FLORIDA BEARING VALUE (FBV) | ONE (1) TEST/300 LF | FBV = 75 | |
| STABILIZED SUBBASE | LIMEROCK BEARING RATIO (LBR) | ONE (1) TEST/SOIL TYPE | LBR = 40 | |
| LIMEROCK BASE | IN–PLACE DENSITY | ONE (1) TEST/300 LF | 98% MODIFIED PROCTOR (ASTM D–1557 OR AASHTO T–180) | ASTM D–2937 D–2922 D–1556 |
| LIMEROCK BASE | LIMEROCK BEARING RATIO (LBR) | PROVIDE CERTIFICATE FROM PLANT | LBR 100 | FM 5–515 |
| CRUSHED CONCRETE BASE | IN–PLACE DENSITY | ONE (1) TEST/300 LF | 98% MODIFIED PROCTOR (ASTM D–1557 OR AASHTO T–180) | ASTM D–2937 D–1556 |
| CRUSHED CONCRETE BASE | LIMEROCK BEARING RATIO (LBR) | (1) PER VISIBLE CHANGE IN MATERIAL BLEND | LBR 100 | |
| ASPHALT | EXTRACTION AND GRADATION | (1) PER DAY PER MIX | PER MIX DESIGN | |
| ASPHALT | THICKNESS AND DENSITY | (1) PER 300 LF ROADWAY | PER MIX DESIGN AND JOB SPECS | D–2922 CORING OR NUCLEAR (DENSITY ONLY) |
| SOIL OPTIMUM MOISTURE/DENSITY | PROCTOR TEST | (1) PER SOIL OR BASE TYPE | | ASTM D–1557 (MODIFIED) ASTM D–558 (STANDARD) AASHTO T–180 (MODIFIED) AASHTO T–99 (STANDARD) |
| CURB SUBBASE | IN–PLACE DENSITY | ONE (1) TEST/300 LF | 98% MODIFIED PROCTOR (ASTM D–1557 OR AASHTO T–180) | |
| CURB SUBBASE (LBR) | LIMEROCK BEARING RATIO (LBR) | (1) TEST/SOIL CHANGE | LBR 40 | |

**STANDARD CONSTRUCTION DETAIL**
**TECHNICAL SPECIFICATIONS FOR TESTING REQUIREMENTS**
INDEX R-6A — MARCH 2014

## PIPED UTILITY INSTALLATION REQUIREMENTS

| ITEM | TEST | FREQUENCY | STANDARD | TEST METHOD |
|---|---|---|---|---|
| PIPE TRENCH SUBBASE (IF SPECIFIED) | IN–PLACE DENSITY | ONE (1) TEST/300 LF | 98% MODIFIED PROCTOR | ASTM D–2937 D–2922 D–1556 |
| PIPED BACKFILL IN PAVED AREAS | IN–PLACE DENSITY | ONE (1) TEST/300 LF PER ONE (1) FOOT VERTICAL LIFT OF FILL | 98% MODIFIED PROCTOR | ASTM D–2937 D–2922 D–1556 |
| PIPED BACKFILL IN GREEN AREAS | IN–PLACE DENSITY | ONE (1) TEST/300 LF PER ONE (1) FOOT VERTICAL LIFT OF FILL | 90% MODIFIED PROCTOR | ASTM D–2937 D–2922 D–1556 |
| SOIL OPTIMUM MOISTURE/DENSITY | PROCTOR TEST | ONE (1) PER SOIL OR BASE TYPE | | ASTM D–2937 (MODIFIED) ASTM D–558 (STANDARD) AASHTO T–180 (MODIFIED) AASHTO T–99 (STD.) |

STANDARD CONSTRUCTION DETAIL
TECHNICAL SPECIFICATIONS FOR TESTING REQUIREMENTS
INDEX R–6B — MARCH 2014

A. SCOPE OF WORK – THE WORK IN THIS SECTION CONSISTS OF FURNISHING AND COMPLETELY INSTALLING SEED AND MULCH OVER THE LIMITS CALLED FOR ON THE CONSTRUCTION DRAWINGS.

B. MATERIALS – GRASS SEED SHALL BE A MIXTURE OF:

| | |
|---|---|
| PENSACOLA BAHIA (50% SCARIFIED SEED) | 80 LBS/ACRE |
| HULLED BERMUDA | 20 LBS/ACRE |
| BROWN TOP MILLET | 30 LBS/ACRE |

IN THE FALL AND WINTER MONTHS (OCT. THRU FEB.) AND WITH THE APPROVAL OF THE CITY, ANNUAL RYE GRASS SHALL BE SUBSTITUTED IN EQUAL AMOUNTS FOR THE BROWN TOP MILLET. SEED SHALL BE PREMIXED BY A SEED COMPANY TO THE PROPORTIONS DESCRIBED ABOVE, WITH CERTIFICATION FROM THE SUPPLIER PROVIDED TO THE CITY, PRIOR TO USE. MULCH USED SHALL BE STRAW OR HAY CONSISTING OF OATS, RYE OR WHEAT STRAW OF PANGOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. MULCH SHALL BE FREE FROM UNDESIRABLE WEED AND OTHER UNDESIRABLE GRASS.

C. METHODS – GRASSING SHALL BE DONE IMMEDIATELY UPON COMPLETION OF THE FINE GRADING OPERATION. HOWEVER, NO SEEDING SHALL BE DONE WHEN THE GROUND IS FROZEN OR UNDULY WET. THE RATE OF SPREAD FOR THE SEED MATERIAL SHALL BE ONE HUNDRED AND THIRTY (130) POUNDS PER ACRE. APPROXIMATELY TWO INCHES (2"), LOOSE THICKNESS, OF MULCH MATERIAL SHALL BE APPLIED INFORMALLY OVER THE GRASSED AREAS (APPROXIMATELY 1 1/2 BALES PER 1000 SQUARE FEET). THE MULCH MATERIAL SHALL BE CUT INTO THE SOIL WITH A DISC HARROW OR OTHERWISE ANCHORED DOWN.

D. FERTILIZER –
1. ANALYSIS OF SOILS SHALL BE OBTAINED BY SUBMITTAL OF SAMPLES TO VOLUSIA COUNTY AGRICULTURAL DEPARTMENT (PHONE: 258–7000). ALL APPLICATION RATES WILL BE BASED ON THIS REPORT. SUBMIT A COPY OF THIS REPORT TO THE CITY PRIOR TO COMMENCING ANY SOIL MODIFICATION.

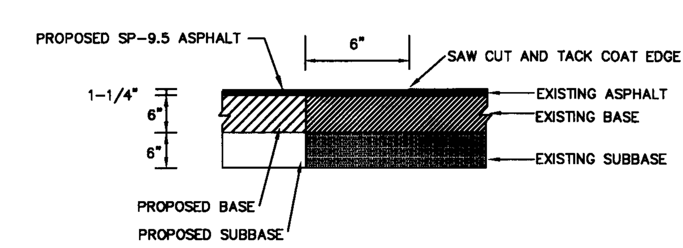
2. THE FERTILIZER SHALL BE A COMMERCIAL GRANULAR TYPE WITH A CHEMICAL DESIGNATION AS RECOMMENDED IN THE SOILS ANALYSIS REPORT.

3. THE NUMERICAL DESIGNATIONS FOR FERTILIZER INDICATE THE MINIMUM PERCENTAGES (RESPECTIVELY) OF (1) TOTAL NITROGEN, (2) AVAILABLE PHOSPHORIC ACID AND (3) WATER SOLUBLE POTASH CONTAINED IN THE FERTILIZER.
a) AT LEAST 50 PERCENT (50%) OF THE PHOSPHORIC ACID SHALL BE FROM A NORMAL SUPER PHOSPHATE OR AN EQUIVALENT SOURCE WHICH WILL PROVIDE A MINIMUM OF TWO UNITS OF SULFUR.
b) THE AMOUNT OF SULFUR SHALL BE INDICATED ON THE QUANTITIVE ANALYSIS CARD ATTACHED TO EACH BAG OR CONTAINER.

4. COMMERCIAL FERTILIZERS SHALL COMPLY WITH THE STATE FERTILIZER LAWS.

5. FERTILIZER MAY, AT THE DISCRETION OF THE ENGINEER/ARCHTECT, UPON THE PRESENTATION BY THE MANUFACTURE OF SATISFACTORY FACTORY EVIDENCE OF ITS FEASIBILITY, BE APPLIED IN LIQUID FORM.

**STANDARD CONSTRUCTION DETAIL**
**SEEDING AND MULCHING**
INDEX R-7 — MARCH 2014




**STANDARD CONSTRUCTION DETAIL**
**PAVEMENT BUTT JOINT**
NTS
INDEX R-9 — MARCH 2014

1. CONSTRUCTION STANDARDS FOR ALL DRAINAGE SYSTEM COMPONENTS SHALL CONFORM TO THE LATEST EDITION OF THE "FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND AS SPECIFIED HEREIN.
2. ALL STORM WATER PIPES AND STRUCTURES SHALL BE INSTALLED ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
3. DEWATERING SHALL BE PROVIDED TO KEEP GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW THE COMPONENT BEING INSTALLED.
4. ALL PIPES AND STRUCTURES SHALL BE PLACED TRUE TO LINES AND GRADES AS DEPICTED ON THE APPROVED PLANS.
5. ALL PIPE JOINTS SHALL BE PROPERLY HONED AND FILTER FABRIC LINED USING A METHOD TO HOLD THE FABRIC IN PLACE DURING BACKFILL.
6. BACKFILL AND COMPACT TO THE SPRING–LINE (CENTER OF PIPE) ELEVATION AND REQUEST CITY INSPECTION AND APPROVAL BEFORE CONTINUING.
7. ALL WORK COVERED WITHOUT CITY INSPECTION WILL BE REQUIRED TO BE EXCAVATED AND INSPECTED AT THE CONTRACTOR'S EXPENSE.
8. TRENCHES SHALL BE BACKFILLED AND COMPACTED WITH CLEAN GRANULAR MATERIAL IN MAX 6" LIFTS WITH A MINIMUM COMPACTION OF 98 PERCENT (AASHTO–T180) IN PAVED AREAS AND 95 PERCENT (AASHTO–T180) IN UNPAVED AREAS.
9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS AT POINTS 1' ABOVE THE PIPE AND AT A MAX. 1' VERTICAL INTERVALS TO FINISH GRADE, AT A MAXIMUM SPACING OF 100 FEET, AND TO FURNISH COPIES OF TEST REPORTS PROMPTLY TO THE CITY'S INSPECTOR.
10. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE (RCP), HIGH DENSITY POLYETHYLENE (HDPE), POLYVINYL CHLORIDE (PVC) OR ALUMINUM CORRUGATED METAL PIPE (ACMP), AS SHOWN ON THE PLANS.
11. STORM DRAINAGE PIPES WITHIN PUBLIC RIGHT–OF–WAY SHALL BE A MINIMUM OF FIFTEEN (15) INCH RCP DIAMETER OR EQUIVALENT.
12. STORM INLETS, MANHOLES, AND CATCH BASINS SHALL BE EITHER POURED IN PLACE OR PRECAST REINFORCED CONCRETE. STRUCTURES SHALL BE REQUIRED AT EACH CHANGE OF PIPE SIZE OR CHANGE IN PIPE DIRECTION.

**STANDARD CONSTRUCTION DETAIL**
**STORM DRAINAGE CONSTRUCTION NOTES**
INDEX ST-1A — MARCH 2014

13. STORM INLETS SHALL BE SPACED IN SUCH A MANNER AS TO ACCEPT ONE HUNDRED (100) PERCENT OF THE DESIGN STORM RUNOFF.
14. WET DETENTION PONDS SHALL BE EIGHT (8) FEET MINIMUM TO TWELVE (12) FEET MAXIMUM DEPTH BELOW THE DESIGN LOW OR NORMAL WATER STAGE.
15. MAXIMUM DISTANCES BETWEEN INLETS AND/OR JUNCTION BOXES:

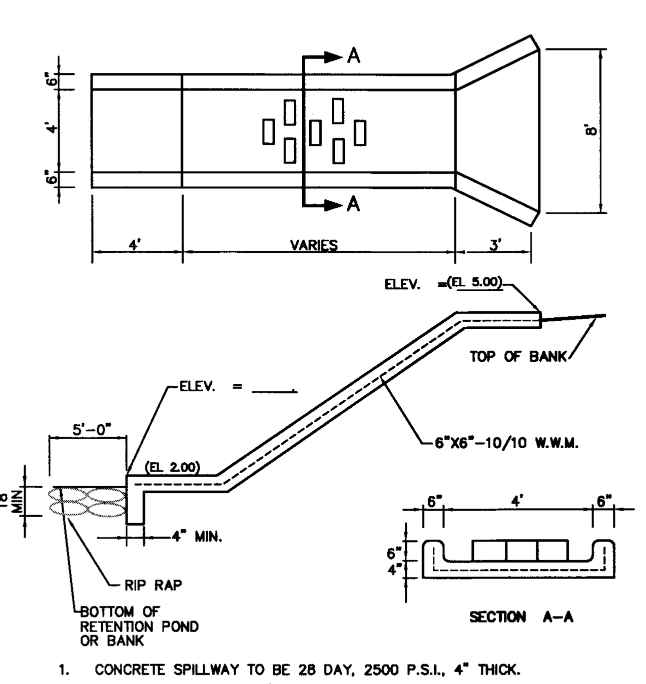
| PIPES SIZE (INCHES) | LENGTH OF RUN (FEET) |
|---|---|
| 15 | 150 |
| 18 | 300 |
| 24 OR GREATER | 400 |

16. ALL SWALES, DITCHES, AND DRY RETENTION POND SIDE SLOPES SHALL BE NO STEEPER THAT 4:1 (H:V) AND SHALL BE SODDED.
17. ALL RETENTION POND BACKSLOPES SHALL BE NO STEEPER THAN 3:1 (H:V) AND SHALL BE SODDED.
18. NORMAL ROADSIDE SWALES SHALL BE CONSTRUCTED TO A MAXIMUM DEPTH OF 18" BELOW THE OUTSIDE EDGE OF PAVEMENT OR CONCRETE CURB.
19. CONCRETE EROSION CONTROL MUST BE PROVIDED WHERE SWALES OR CULVERTS INTERCEPT DRAINAGE DITCHES.
20. A MINIMUM ONE FOOT (1') FREEBOARD ABOVE THE DESIGN HIGH WATER ELEVATION IS REQUIRED AT ALL POINTS AROUND WET RETENTION PONDS.
21. A MINIMUM SIX INCH (6") FREEBOARD ABOVE THE DESIGN HIGH WATER ELEVATION IS REQUIRED AT ALL POINTS AROUND DRY RETENTION PONDS.
22. POND INFLOW SHALL GENERALLY BE CONSTRUCTED WITH REINFORCED CONCRETE AND SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
23. OUTLET STRUCTURES ARE REQUIRED ON ALL PONDS. ALL OUTLET STRUCTURES SHALL BE PERMANENT CONCRETE OVERFLOW WEIRS OR CONCRETE OUTLET CONTROL STRUCTURES. NO SODDED WEIRS OR OTHER NON–PERMANENT OVERFLOW STRUCTURES SHALL BE ALLOWED.
24. SOIL EROSION CONTROL MEASURES SATISFACTORY TO THE CITY, SHALL BE EMPLOYED DURING CONSTRUCTION AND UPON COMPLETION OF THE POND.
25. THE CITY MAY REQUEST THAT THE DEVELOPER SUBMIT A REPORT BY A QUALIFIED HYDROLOGIST ON THE IMPACT THE POND WILL HAVE ON NEIGHBORING WATER TABLE ELEVATIONS BOTH DURING CONSTRUCTION AND AFTER POND COMPLETION. THE CITY MAY REQUIRE GROUNDWATER MONITORING DURING THE POND EXCAVATION.

**STANDARD CONSTRUCTION DETAIL**
**STORM DRAINAGE CONSTRUCTION NOTES**
INDEX ST-1B — MARCH 2014

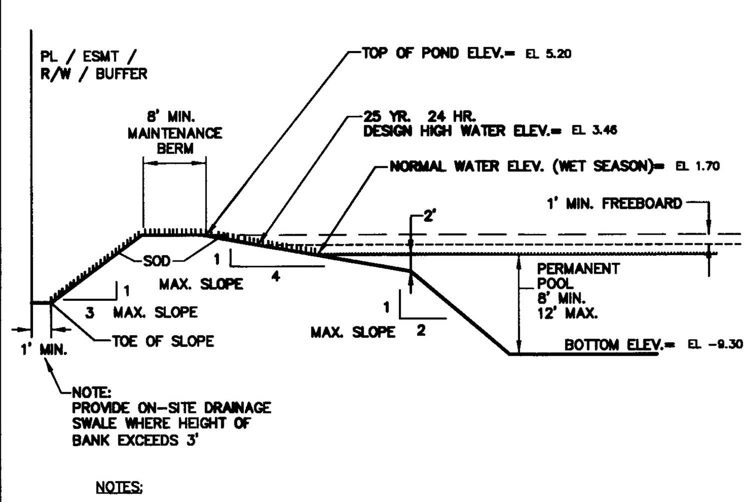
26. ADEQUATE MAINTENANCE ACCESS AS APPROVED BY THE CITY SHALL BE PROVIDED AROUND THE ENTIRE PERIMETER OF ALL PONDS AND ASSOCIATED OUTFALLS DISCHARGING INTO AND OUT OF PONDS.
27. IN GENERAL, ALL RETENTION/DETENTION PONDS MUST BE CONSTRUCTED PRIOR TO ANY ROAD, PARKING LOT, OR BUILDING CONSTRUCTION COMMENCING OR AS CURRENT PERMIT CONDITIONS DICTATE.
28. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ANY DEWATERING PERMITS THAT MAY BE REQUIRED.
29. CULVERTS CROSSING RIGHT–OF–WAYS SHALL EXTEND FROM RIGHT–OF–WAY LINE TO RIGHT–OF–WAY LINE UNDER THE ROADWAY.
30. ALL STORM WATER DISCHARGE FROM RETENTION/DETENTION PONDS ARE REQUIRED TO BE CHANNELED INTO DEFINED DRAINAGE PATHS TO EXISTING WATER BODIES, WETLANDS, DITCHES, ETC.
31. THE CITY OF ORMOND BEACH REQUIRES THE DEVELOPER TO TELEVISE ANY AND ALL STORM SEWER PIPE SYSTEMS IN THE PRESENCE OF THE CITY INSPECTOR BY A REPUTABLE COMPANY THAT ENGAGES IN THIS TYPE OF WORK. THE DVD SHALL BE IN HIGH QUALITY STANDARD RESOLUTION USING A CAMERA WITH SUITABLE LIGHTING TO ALLOW A CLEAR FOCUSED PICTURE OF THE ENTIRE INSIDE PIPE CIRCUMFERENCE. THE DVD SHALL BE NON–STOP WITH AUDIO DESCRIBING WHAT IS BEING VIEWED. COPIES OF DVD SHALL BE SUBMITTED IN DVD FORMAT ACCOMPANIED BY WRITTEN LOGS DESCRIBING THE CONDITION OF THE LINES AT LEAST FORTY–EIGHT (48) HOURS PRIOR TO REQUESTING FINAL INSPECTIONS. ANY DEFECTS NOTED SHALL BE CORRECTED PRIOR TO ACCEPTANCE BY THE CITY OR ISSUANCE OF CERTIFICATE OF OCCUPANCY.

**STANDARD CONSTRUCTION DETAIL**
**STORM DRAINAGE CONSTRUCTION NOTES**
INDEX ST-1C — MARCH 2014



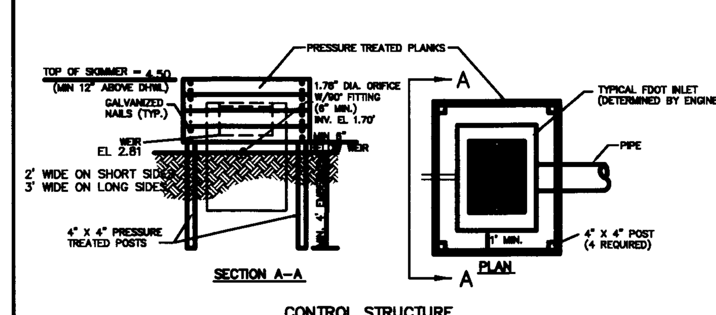

1. CONCRETE SPILLWAY TO BE 28 DAY, 2500 P.S.I., 4" THICK.
2. PLACE SOD AT LEAST 5' AROUND ALL STRUCTURE EDGES ABOVE STANDING WATER.
3. ALL EXPOSED CORNERS TO BE ROUNDED @ 3/4" MINIMUM RADIUS.

**STANDARD CONSTRUCTION DETAIL**
**CONCRETE SPILLWAY**
NTS
INDEX ST-2 — MARCH 2014

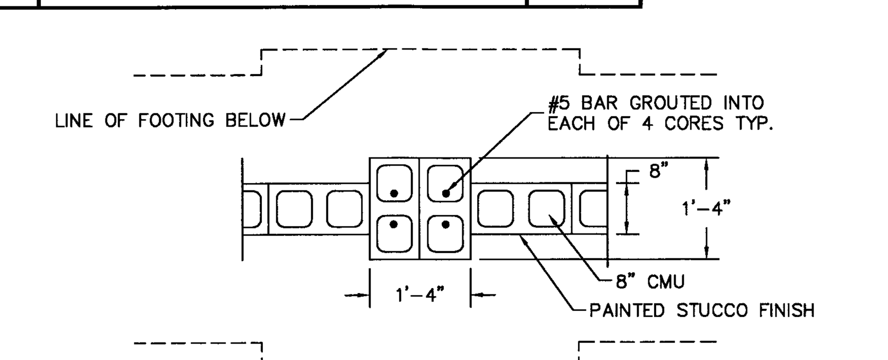



NOTES:
1. SOD IS TO BE PLACED TO EDGE OF WATER EXCEPT IN LITTORAL PLANTING AREAS.
2. A MINIMUM OF ONE FOOT OF FREEBOARD IS REQUIRED BETWEEN DESIGN HIGH WATER ELEVATION AND TOP OF BANK.
3. PROVIDE DESIGN DATA WHERE INDICATED (=)
4. PROVIDE SPILLWAY & DRAWDOWN DETAILS
5. IN ACCORDANCE WITH SECTION 3–58(F) ALL WET DETENTION POND SHALL INCLUDE AN AERATION FOUNTAIN TO ENSURE PROPER WATER QUALITY, ENHANCE MAINTENANCE AND INMPROVE AESTHETICS. PONDS SHALL BE DESIGNED TO APPEAR NATURAL AND NONGEOMETRIC.

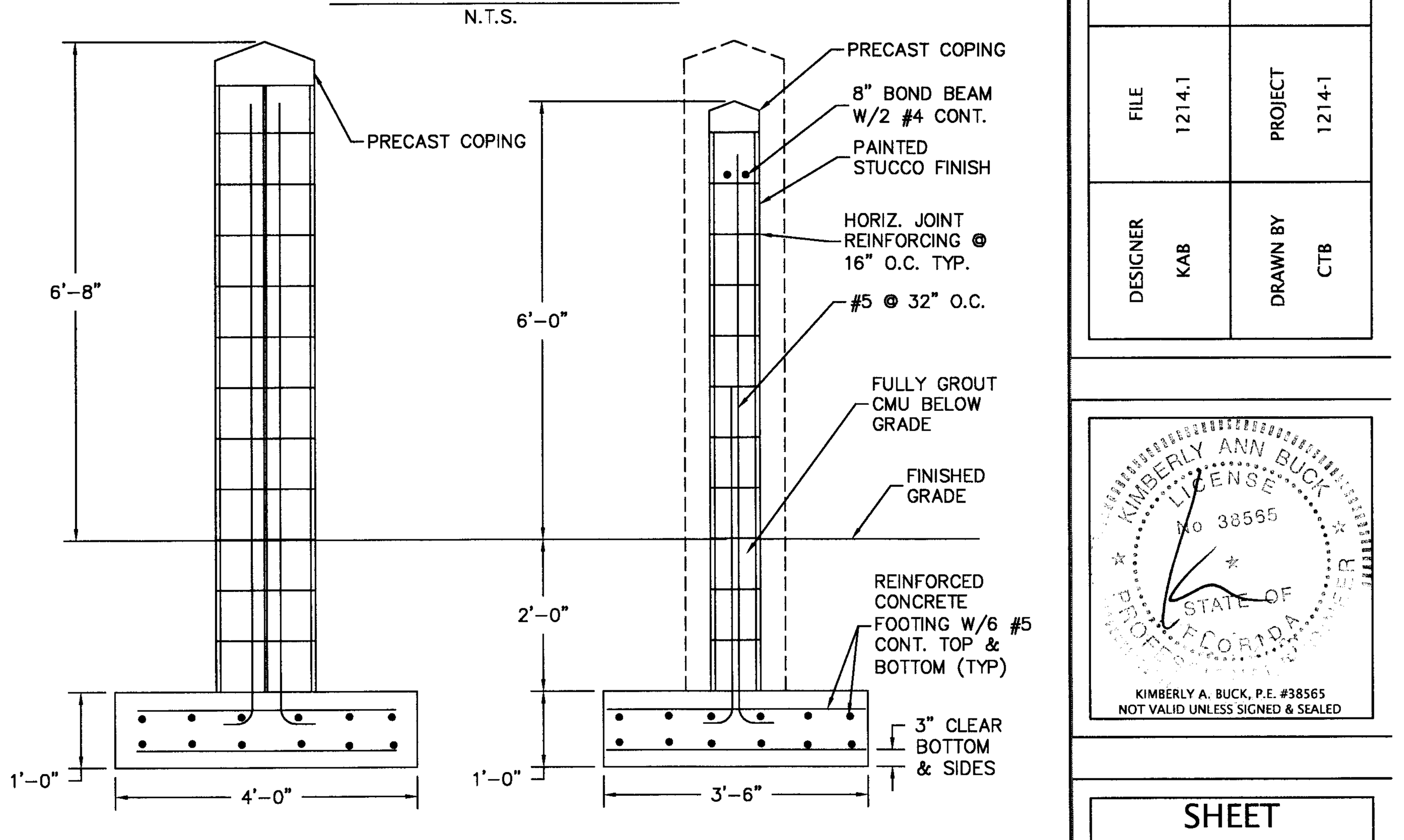
**STANDARD CONSTRUCTION DETAIL**
**WET RETENTION POND**
NTS
INDEX ST-5 — MARCH 2014




**STANDARD CONSTRUCTION DETAIL**
**SKIMMER DETAIL**
NTS
INDEX ST-8 — MARCH 2014




SCREEN WALL COLUMN DETAIL
N.T.S.




SCREEN WALL SECTION @ COLUMN
N.T.S.
NOTE: COLUMNS TO BE PLACES 30' O.C.

SCREEN WALL SECTION
N.T.S.

City of Ormond Beach — FINAL APPROVAL — Site Plan Review Committee


ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE No. EB5479
880 AIRPORT ROAD, SUITE 113
ORMOND BEACH, FL 32174
TEL: (386) 673-7640
FAX: (386) 673-3927

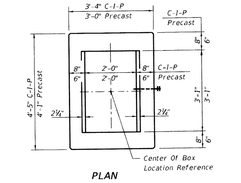

# 146 N. ORCHARD ST RV/TRAILER STORAGE ORMOND BEACH, FL
DETAILS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MRZ |

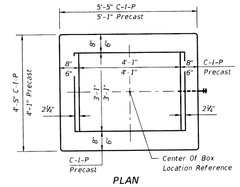
| DATE | FILE | DESIGNER |
|---|---|---|
| 5-13-2013 | 1214.1 | KAB |
| **SCALE** | **PROJECT** | **DRAWN BY** |
| 1:20 | 1214-1 | CTB |

KIMBERLY ANN BUCK — LICENSE No 38565 — STATE OF FLORIDA — PROFESSIONAL ENGINEER
KIMBERLY A. BUCK, P.E. #38565
NOT VALID UNLESS SIGNED & SEALED

SHEET 6 OF 8




PLAN

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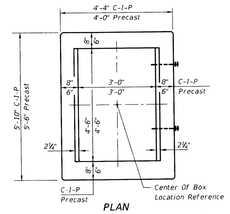
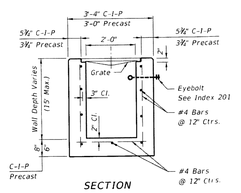
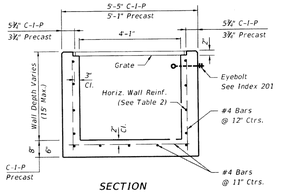


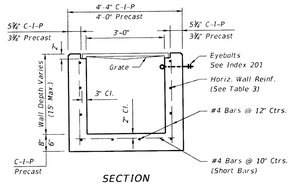

PLAN




SECTION




SECTION




SECTION

### HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 1)

| WALL DEPTH | SCHEDULE | AREA (in²/ft.) | MAX. SPACING | |
|---|---|---|---|---|
| | | | BARS | WWF |
| 0'-15' | A12 | 0.20 | 12" | 8" |
| | | | | |

### TYPE C

Recommended Maximum Pipe Size:

2'-0" Wall – 18" Pipe
3'-1" Wall – 24" Pipe (18" where an 18" pipe enters a 2'-0" wall)

### HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 2)

| WALL DEPTH | SCHEDULE | AREA (in²/ft.) | MAX. SPACING | |
|---|---|---|---|---|
| | | | BARS | WWF |
| 0'-6' | A12 | 0.20 | 12" | 8" |
| 6'-10' | A6 | 0.20 | 6" | 5" |
| 10'-13' | A4 | 0.20 | 4" | 3" |
| 10'-15' | B5.5 | 0.24 | 5½" | 5" |

### TYPE D

Recommended Maximum Pipe Size:

3'-1" Wall – 24" Pipe
4'-1" Wall – 36" Pipe

### HORIZONTAL WALL REINFORCING SCHEDULES (TABLE 3)

| WALL DEPTH | SCHEDULE | AREA (in²/ft.) | MAX. SPACING | |
|---|---|---|---|---|
| | | | BARS | WWF |
| 0'-5' | A12 | 0.20 | 12" | 8" |
| 0'-7.5' | A6 | 0.20 | 6" | 5" |
| 7.5'-10' | B5.5 | 0.24 | 5½" | 5" |
| 10'-15' | C6.5 | 0.37 | 6½" | 6" |

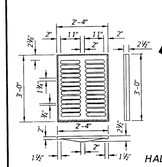
### TYPE E

Recommended Maximum Pipe Size:

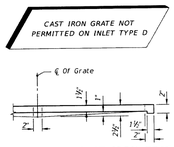
3'-0" Wall – 24" Pipe
4'-6" Wall – 36" Pipe

5/30/2014 2:38:39 PM

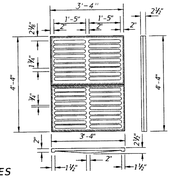
| LAST REVISION 07/01/05 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | DITCH BOTTOM INLET TYPES C, D, E AND H | INDEX NO. 232 | SHEET NO. 1 of 7 |
|---|---|---|---|---|---|---|



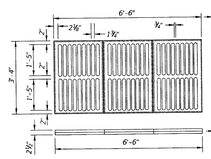

TYPE C
Approx. Weight 235 Lbs.



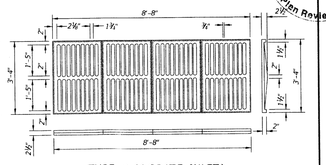

HALF SECTION CAST IRON GRATES




TYPE E
Approx. Weight 465 Lbs.

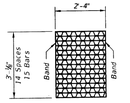



TYPE H (3-GRATE INLET)
Approx. Weight 725 Lbs.

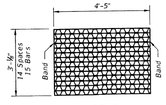



TYPE H (4-GRATE INLET)
Approx. Weight 967 Lbs.

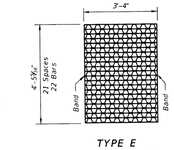
## CAST IRON GRATES



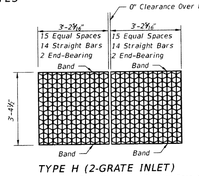

TYPE C
Straight Bars 2"x ½"
Reticuline Bars 1½" x 9/16"
Bands 2" x ¼"
Approx. Weight 104 Lbs.



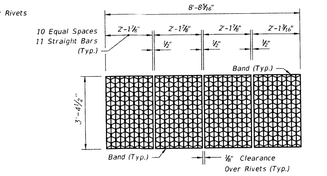

TYPE D
Straight Bars 2" x ½"
Reticuline Bars 1½" x 9/16"
Bands 2" x ½"
Approx. Weight 190 Lbs.




TYPE E
Straight Bars 2" x ½"
Reticuline Bars 1½" x 9/16"
Bands 2" x ½"
Approx. Weight 215 Lbs.




TYPE H (2-GRATE INLET)
Straight End-Bearing Bars 2" x ½"
Straight Bearing Bars 2" x ½"
Reticuline Bars 1½" x 9/16"
Banding Bars 2" x ½"
Approx. Total Weight 310 Lbs.




TYPE H (4-GRATE INLET)
Straight End-Bearing Bars 2" x ½"
Reticuline Bars 1½" x 9/16"
Banding Bars 2" x 9/16"
Approx. Total Weight 388 Lbs.

## STEEL GRATES

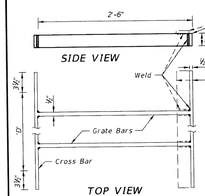
NOTE: Steel Grates Are Required On Inlets With Traversable Slots And On Inlets where Bicycle Traffic Is Anticipated.

## GENERAL NOTES

1. These inlets are suitable for bicycle traffic and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads. These inlets may be placed in areas subject to occasional pedestrian traffic such as landscaped areas and pavement areas where pedestrians can walk around the inlet.
2. Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and areas subject to pedestrians shall have traversable slots. The traversable slot modification is not adaptable to inlet Type H. Slots may be constructed at either or both ends as shown on plans. Traversable slots shall not be used in areas subject to occasional bicycle traffic.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dip galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended maximum pipe sizes shown are for concrete pipe. Size for other types of pipe must be checked for fit.
5. All exposed edges and corners shall be ½" chamfer or tooled to ¼" radius.
6. Concrete inlet pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans; but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for as inlets partial. For conversion work and method of payment see 'TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS'.
8. Sodding to be used on all inlets not located in paved areas and paid for under contract unit price for Performance Turf, SY.
9. For supplementary details see Index No. 201.
10. All reinforcing is Grade 60 bars with 2" min. cover unless otherwise noted. Bars to be cut or bent for 1½" clearance around pipe opening. Provide one additional #4 bar above and at each side of pipe opening.

5/30/2014 2:38:40 PM

| LAST REVISION 07/01/10 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | DITCH BOTTOM INLET TYPES C, D, E AND H | INDEX NO. 232 | SHEET NO. 3 of 7 |
|---|---|---|---|---|---|---|



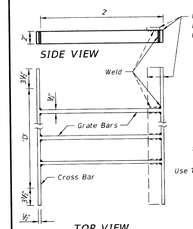

SIDE VIEW

SECTION AA

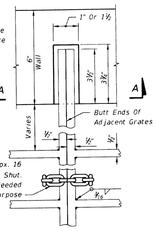
TOP VIEW
GRATE TYPE NO. 1

| Pipe Size | Grate Bars Reqd. | Grate (lb) |
|---|---|---|
| 15" | 2 | 28.93 |

Bars to be evenly spaced across dimension 'D'
All bars ½" x 2"




SIDE VIEW

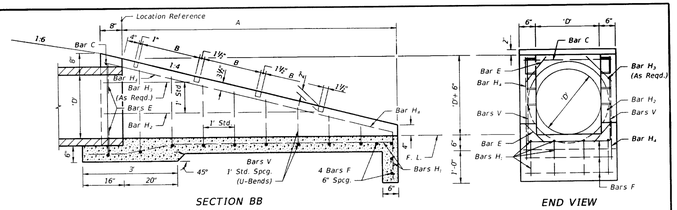



TOP VIEW
GRATE, SEAT, WELD & CHAIN DETAIL

TOP VIEW
GRATE TYPE NO. 2

| Pipe Size | Grate Bars Reqd. | Grate (lb) |
|---|---|---|
| 18" | 3 | 33.69 |
| 24" | 4 | 43.63 |
| 30" | 5 | 53.55 |

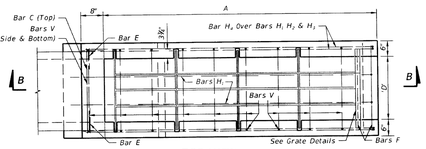
Bars to be evenly spaced across dimension 'D'.
All bars ½" x 2".




SECTION BB




END VIEW



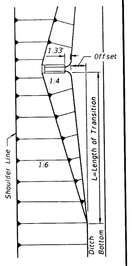

TOP VIEW

### TABLE OF DIMENSIONS AND QUANTITIES

| | Pipe Size D | A | B | Class I Conc. (CY) | Reinf. Steel (lb) | Number Of Grates Regd. Type No. 1 | Number Of Grates Regd. Type No. 2 | Total Grate Wt. (lb) | Sodding (SY) | Slope Transition Offset | Slope Transition L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Slope 1:4 | 15" | 5.67' | 2.38' | 0.85 | 56 | 2 | 0 | 57.86 | 15 | 4.2' | 42' |
| | 18" | 6.67' | 1.875' | 1.01 | 73 | 0 | 3 | 101.08 | 16 | 4.8' | 48' |
| | 24" | 8.67' | 1.875' | 1.65 | 97 | 0 | 4 | 174.52 | 19 | 5.8' | 58' |
| | 30" | 10.67' | 1.875' | 2.33 | 129 | 0 | 5 | 267.75 | 21 | 6.9' | 69' |

### GENERAL NOTES

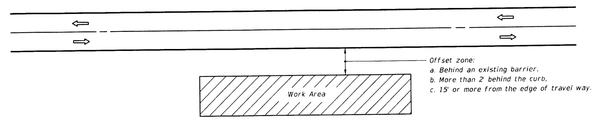
1. This endwall is to be used only in the clear zone for the drainage of medians and other areas having low design velocities and negligible debris.
2. Reinforcing steel: All bars are size #4. Spacings shown are center to center. Laps to be 12" minimum. Clearance is 2" except as noted. Square welded wire fabric (two cages max.) having an equivalent cross sectional area (0.20 sq. in.) may be substituted for bar reinforcement.
3. Grates shall be ASTM A242/A242M, A572/A572M or ASTM A588/A588M, Grade 50 steel. When "Alt. G" grates are specified in the plans, grates shall be galvanized in accordance with Section 975 and 425.3.2 of the Standard Specifications.
4. Endwall to be paid for under the contract unit price for U-Endwall, Each. Payment shall include cost of concrete, reinforcing steel, grate, and accessories. Quantities shown are for estimating purposes only.
5. Sod slopes 5' each side and above endwall. Sodding to be paid for under contract unit price for Performance Turf, SY.
6. Precasting of this endwall will be permitted. Precast units shall conform to the dimensions shown or in accordance with approved shop drawings. Request for shop drawing approval shall be directed to the State Drainage Engineer. Use Index No. 201 for opening and grouting details.
7. Concrete shall be Class I except ASTM C478 (4000 psi) concrete may be substituted for precast items manufactured in plants meeting the requirements of Section 449 of the Specifications.




FRONT SLOPE TRANSITION AT ENDWALL

5/30/2014 2:43:33 PM

| LAST REVISION 07/01/09 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | U-TYPE CONCRETE ENDWALLS WITH GRATES 15" TO 30" PIPE | INDEX NO. 260 | SHEET NO. 1 of 1 |
|---|---|---|---|---|---|---|




### GENERAL NOTES

1. If the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in conformance with Index No. 602.
2. No special signing is required.
3. When a side road intersects the highway within the work area, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. When construction activities encroach on a sidewalk refer to Index No. 660.
5. For general TCZ requirements and additional information, refer to Index No. 600.

### SYMBOLS

Work Area

Lane Identification + Direction of Traffic

### CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.

5/30/2014 4:47:53 PM

| LAST REVISION 07/01/05 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | TWO-LANE, TWO-WAY, WORK OUTSIDE SHOULDER | INDEX NO. 601 | SHEET NO. 1 of 1 |
|---|---|---|---|---|---|---|

City of Ormond Beach
FINAL APPROVAL
Site Plan Review Committee

ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE No. EB5479
880 AIRPORT ROAD, SUITE. 113
ORMOND BEACH, FL 32174
TEL: (386) 673-7640
FAX: (386) 673-3927

146 N. ORCHARD ST
RV/TRAILER STORAGE
ORMOND BEACH, FL
DETAILS

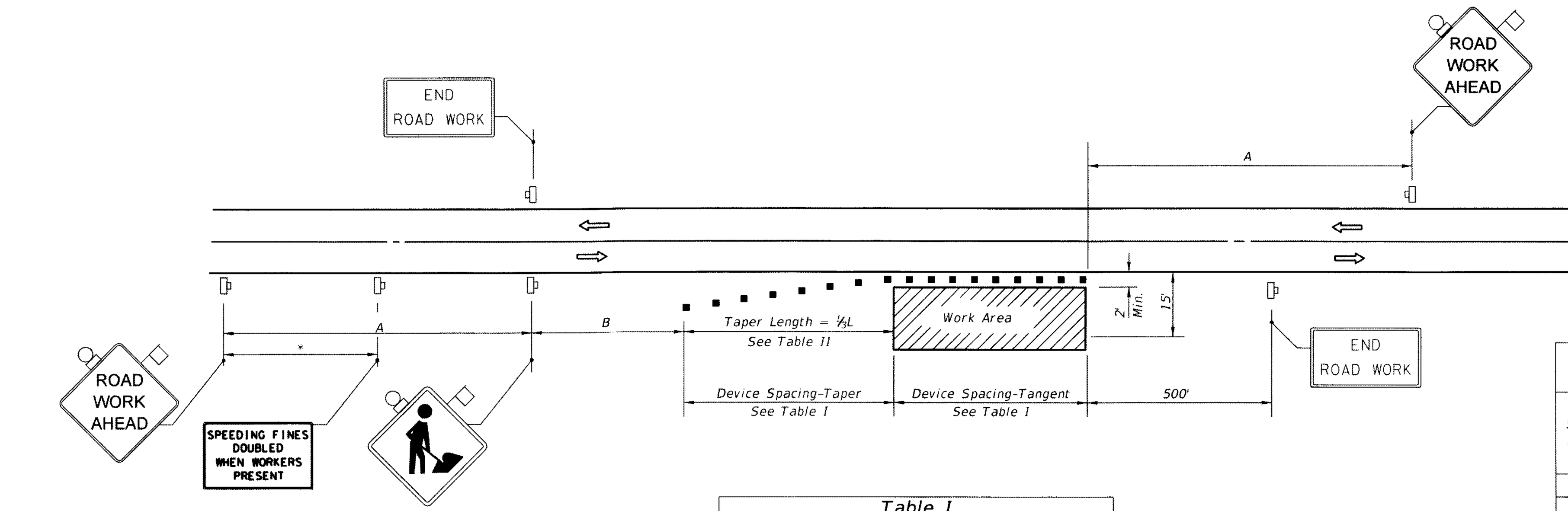
| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MRZ |

| | |
|---|---|
| DESIGNER KAB | DRAWN BY CTB |
| FILE 1214-1 | PROJECT 1214-1 |
| DATE 5-13-2013 | SCALE 1:20 |

KIMBERLY ANN BUCK
LICENSE
No. 38565
STATE OF FLORIDA
PROFESSIONAL ENGINEER
KIMBERLY A. BUCK, P.E. #38565
NOT VALID UNLESS SIGNED & SEALED

SHEET 7 OF 8

City of Ormond Beach
FINAL APPROVAL
Site Plan Review Committee




| DISTANCE BETWEEN SIGNS | | |
|---|---|---|
| Speed | Spacing (ft.) | |
| | A | B |
| 40 mph or less | 200 | 200 |
| 45 mph | 350 | 350 |
| 50 mph or greater | 500 | 500 |

*Midway between signs.

| Table I Device Spacing | | | | |
|---|---|---|---|---|
| Speed (mph) | Max. Distance Between Devices (ft.) | | | |
| | Cones or Tubular Markers | | Type I or Type II Barricades or Vertical Panels or Drums | |
| | Taper | Tangent | Taper | Tangent |
| 25 | 25 | 50 | 25 | 50 |
| 30 to 45 | 25 | 50 | 30 | 50 |
| 50 to 70 | 25 | 50 | 50 | 100 |

| Table II Taper Length - Shoulder | | | | |
|---|---|---|---|---|
| Speed (mph) | ⅓L (ft) | | | Notes |
| | 8' Shldr. | 10' Shldr. | 12' Shldr. | |
| 25 | 28 | 35 | 42 | $L=\frac{WS^2}{60}$ |
| 30 | 40 | 50 | 60 | |
| 35 | 55 | 68 | 82 | |
| 40 | 72 | 90 | 107 | |
| 45 | 120 | 150 | 180 | L=WS |
| 50 | 133 | 167 | 200 | |
| 55 | 147 | 183 | 220 | |
| 60 | 160 | 200 | 240 | |
| 65 | 173 | 217 | 260 | |
| 70 | 187 | 233 | 280 | |

8' minimum shoulder width

⅓L = Length of shoulder taper in feet

W = Width of total shoulder in feet (combined paved and unpaved width)

S = Posted speed limit (mph)

### SYMBOLS

- Work Area
- Sign With 18" x 18" (Min.) Orange Flag And Type B Light
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

### GENERAL NOTES

1. When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index No. 603.
2. SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
3. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. For general TCZ requirements and additional information, refer to Index No. 600.

### DURATION NOTES

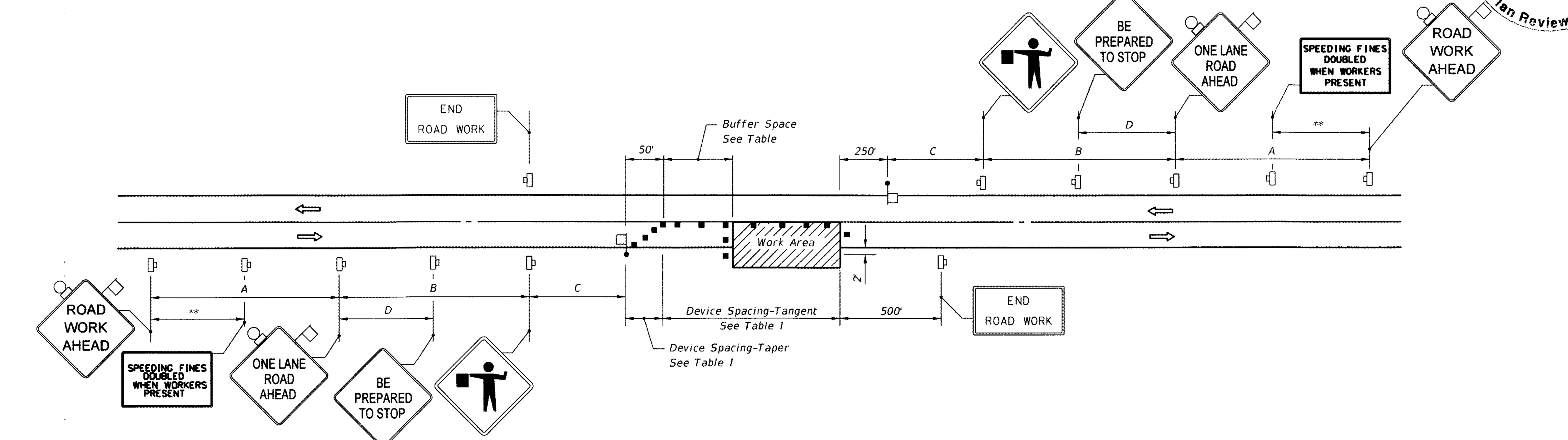
1. Signs and channelizing devices may be omitted if all of the following conditions are met:
   a. Work operations are 60 minutes or less.
   b. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

### CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

5/20/2014 4:48:11 PM

| LAST REVISION 07/01/12 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | TWO-LANE, TWO-WAY, WORK ON SHOULDER | INDEX NO. 602 | SHEET NO. 1 of 1 |
|---|---|---|---|---|---|---|




| DISTANCE BETWEEN SIGNS | | | | |
|---|---|---|---|---|
| Speed (mph) | Spacing (ft.) | | | |
| | A | B | C | D |
| 40 or less | 200 | 200 | 200 | 100 |
| 45 | 350 | 350 | 350 | 175 |
| 50 | 500 | 500 | 500 | 250 |
| 55 or greater | 2640 | 1640 | 1000 | 500 |

* The ROAD WORK 1 MILE sign may be used as an alternate to the ROAD WORK AHEAD sign.

** 500' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

*** BE PREPARED TO STOP sign may be omitted for speeds of 45 MPH or less.

| TABLE I DEVICE SPACING | | | | |
|---|---|---|---|---|
| Speed (mph) | Max. Distance Between Devices (ft.) | | | |
| | Cones or Tubular Markers | | Type I or Type II Barricades or Vertical Panels or Drums | |
| | Taper | Tangent | Taper | Tangent |
| 25 to 45 | 20 | 50 | 20 | 50 |
| 50 to 70 | 20 | 50 | 20 | 100 |

| BUFFER SPACE | |
|---|---|
| Speed (mph) | Dist. (ft.) |
| 25 | 155 |
| 30 | 200 |
| 35 | 250 |
| 40 | 305 |
| 45 | 360 |
| 50 | 425 |
| 55 | 495 |
| 60 | 570 |
| 65 | 645 |
| 70 | 730 |

When Buffer Space cannot be attained due to geometric constraints, the greatest attainable length shall be used, but not less than 200 ft.

### SYMBOLS

- Work Area
- Sign With 18" x 18" (Min.) Orange Flag And Type B Light
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Automated Flagger Assistance Devices (AFAD), With Gate
- Lane Identification + Direction of Traffic

### GENERAL NOTES

1. Work operations shall be confined to one traffic lane, leaving the opposite lane open to traffic.
2. Additional one-way control may be effected by the following means:
   1. Flag-carrying vehicle;
   2. Official vehicle;
   3. Pilot vehicles;
   4. Traffic signals.

   When flaggers are the sole means of one-way control, the flaggers shall be in sight of each other or in direct communication at all times.
3. The ONE-LANE ROAD signs are to be fully covered and the FLAGGER signs either removed or fully covered when no work is being performed and the highway is open to two-way traffic.
4. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
5. The two channelizing devices directly in front of the work area and the one channelizing device directly at the end of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
6. For Temporary Raised Rumble Strips, general TCZ requirements and additional information, refer to Index No. 600.

### DURATION NOTES

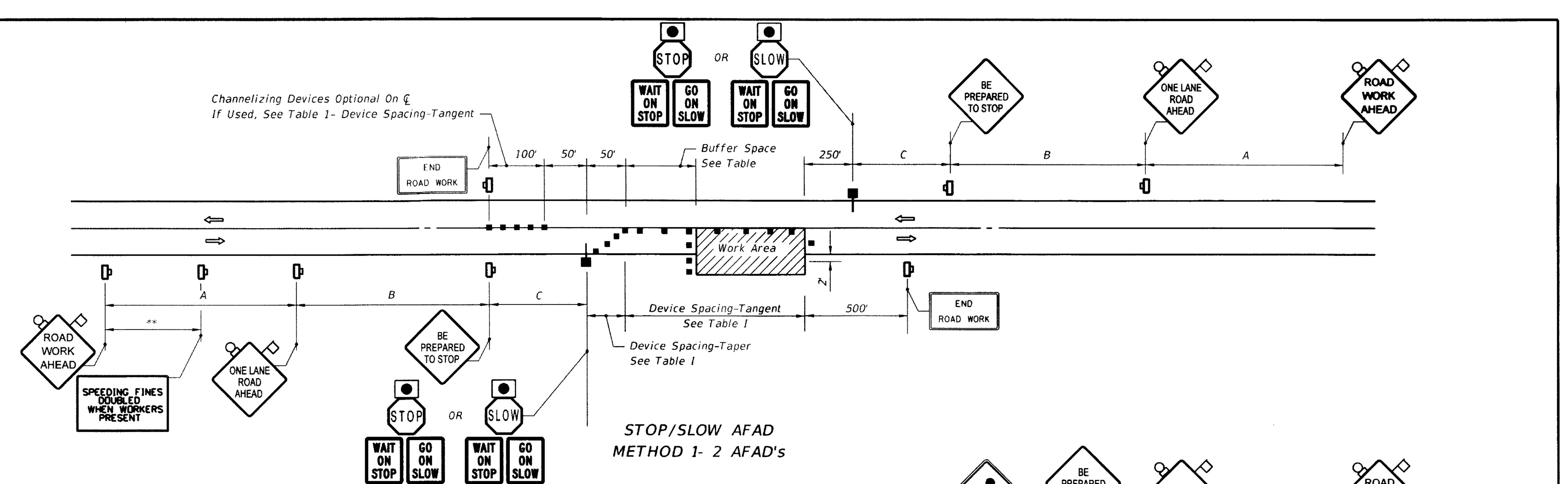
1. ROAD WORK AHEAD and the BE PREPARED TO STOP signs may be omitted if all of the following conditions are met:
   a. Work operations are 60 minutes or less.
   b. Speed limit is 45 mph or less.
   c. No sight obstructions to vehicles approaching the work area for a distance equal to the buffer space.
   d. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
   e. Volume and complexity of the roadway has been considered.

### CONDITIONS

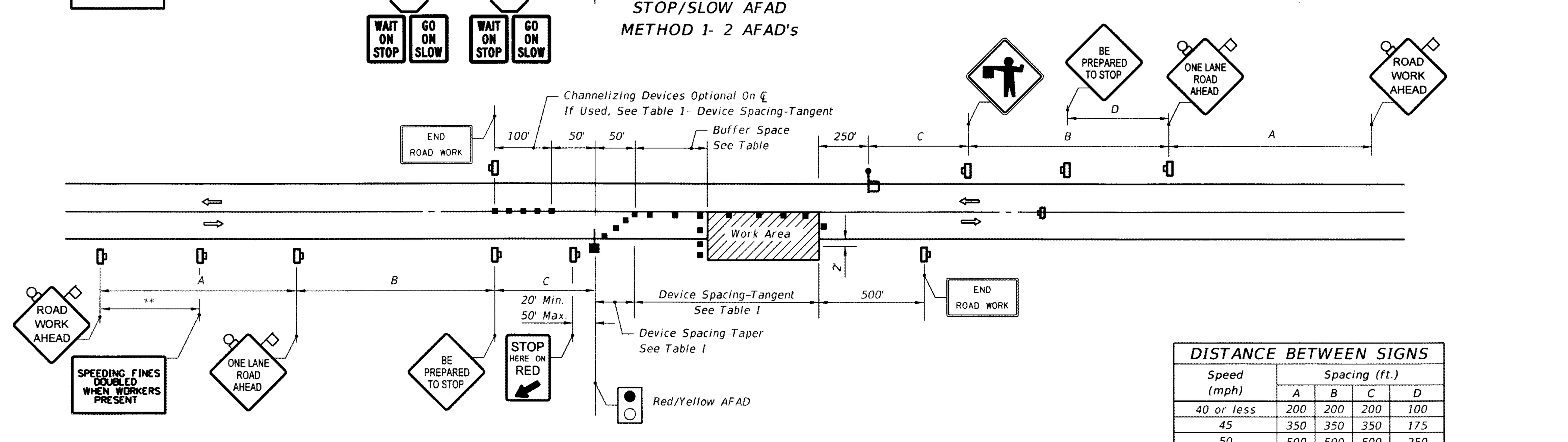
WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA BETWEEN THE CENTERLINE AND A LINE 2' OUTSIDE THE EDGE OF TRAVEL WAY.

5/27/2014 5:17:38 PM

| LAST REVISION 07/01/14 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY | INDEX NO. 603 | SHEET NO. 1 of 2 |
|---|---|---|---|---|---|---|




STOP/SLOW AFAD
METHOD 1- 2 AFAD's




RED/YELLOW AFAD
METHOD 2- 1 AFAD AND A FLAGGER

| DISTANCE BETWEEN SIGNS | | | | |
|---|---|---|---|---|
| Speed (mph) | Spacing (ft.) | | | |
| | A | B | C | D |
| 40 or less | 200 | 200 | 200 | 100 |
| 45 | 350 | 350 | 350 | 175 |
| 50 | 500 | 500 | 500 | 250 |
| 55 or greater | 2640 | 1640 | 1000 | 500 |

* (See Sheet 1 Notes)
** (See Sheet 1 Notes)

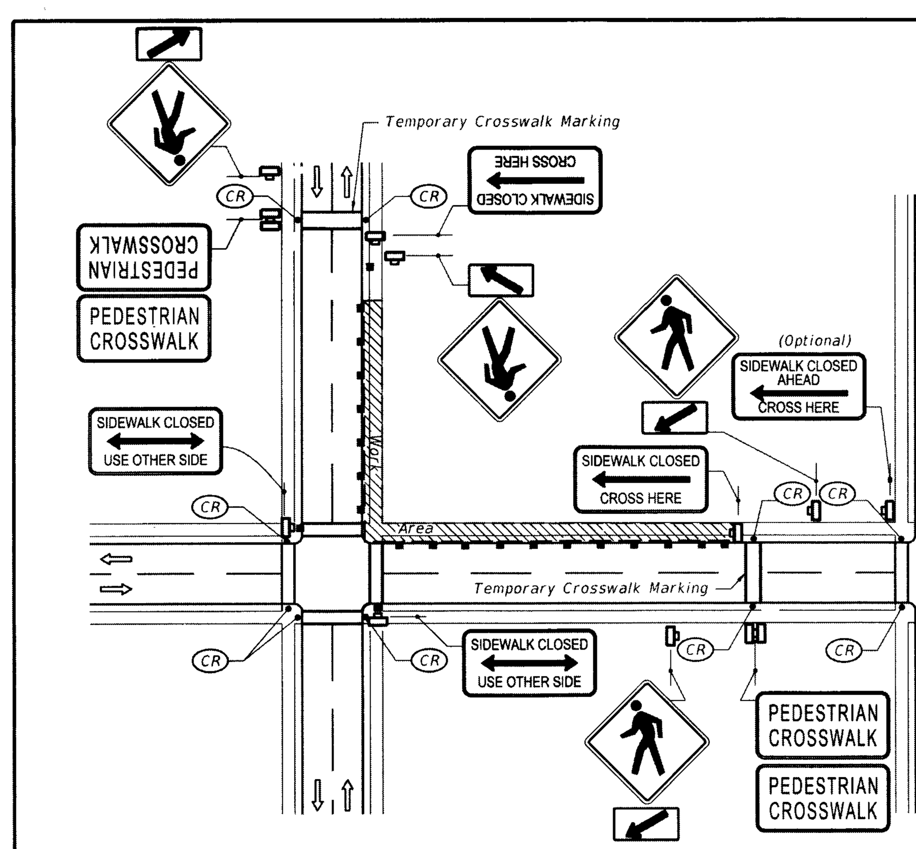
### AUTOMATED FLAGGER ASSISTANCE DEVICES (AFAD) NOTES

1. AFAD's shall only be used in situations where there is only one lane of approaching traffic in the direction to be controlled.
2. When used at nighttime, the AFAD flagging station shall be illuminated.
3. When the AFAD is not in use, it shall be moved outside the clear zone or be shielded by a barrier or crash cushion and the signs associated with the AFAD shall be removed or covered.
4. Duration Notes shown on sheet 1 of 2 do not apply when AFAD are used.
5. Only qualified flaggers who have been trained in the operation of the AFAD may operate the AFAD. When in use, each AFAD must be in view of and attended at all times by the flagger operating the device. Use two flaggers and one of the following methods in the deployment of AFAD:
   Method 1: Place an AFAD at each end of the temporary traffic control zone.
   Method 2: Place an AFAD at one end of the temporary traffic control zone and a flagger at the opposite end.

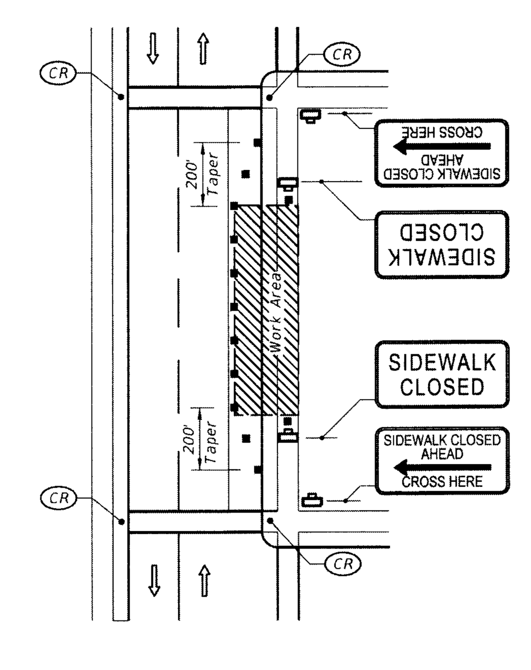
A single flagger may simultaneously operate two AFAD (Method 1) or may operate a single AFAD on one end of the temporary traffic control zone while being the flagger at the opposite end of the temporary traffic control zone (Method 2) if all four of the following conditions are present:
a. The flagger has an unobstructed view of the AFAD(s);
b. The flagger has an unobstructed view of approaching traffic in both directions; and
c. For Method 1, the AFAD's are less than 800 ft apart. For Method 2, the AFAD and the flagger are less than 800 ft apart.
d. Ensure two trained flaggers are available on-site to provide normal flagging operations should an AFAD malfunction.

5/27/2014 5:17:38 PM

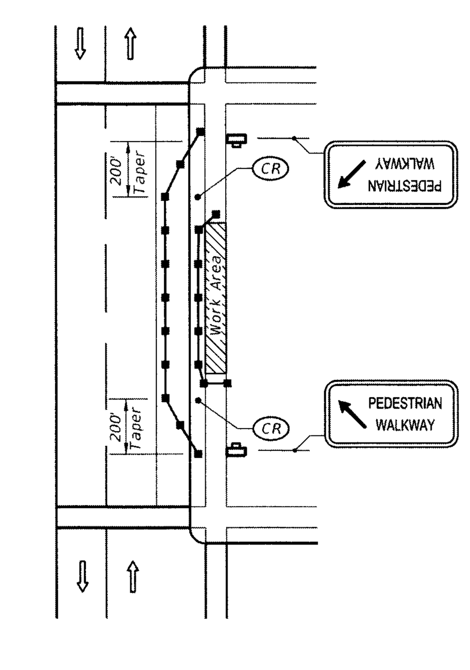
| LAST REVISION 07/01/10 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY | INDEX NO. 603 | SHEET NO. 2 of 2 |
|---|---|---|---|---|---|---|




CORNER SIDEWALK CLOSURE
WITH TEMPORARY CROSSWALKS




MID-BLOCK SIDEWALK
CLOSURE




MID-BLOCK SIDEWALK CLOSURE
WITH TEMPORARY WALKWAY

### GENERAL NOTES

1. Only the signs controlling pedestrian flows are shown. Other work zone signs will be needed to control traffic on the streets.
2. For spacing of traffic control devices and general TCZ requirements refer to Index No. 600. Maximum spacing between barricades, vertical panels, drums or tubular markers shall not be greater than 25'.
3. Street lighting should be considered.
4. For nighttime closures use Type A flashing warning lights on barricades supporting signs and closing sidewalks. Use Type C steady-burn lights on channelizing devices separating the work area from vehicular traffic.
5. Pedestrian traffic signal display controlling closed crosswalks shall be covered or deactivated.
6. Post Mounted Signs located near or adjacent to a sidewalk shall have a 7' minimum clearance from the bottom of sign to the sidewalk.
7. When construction activities involve sidewalks on both sides of the street, efforts should be made to stage the construction so that both sidewalks are not out of service at the same time.
8. In the event that sidewalks on both sides of the street are closed, pedestrians shall be guided around the construction zone.
9. Temporary walkways shall be a minimum of 4' wide with a maximum 0.02 cross slope and a maximum 0.05 running slope between ramps. Temporary walkways less than 5' in width shall provide for a 5' x 5' passing space at intervals not to exceed 200'. Temporary ramps shall meet the requirements for curb ramps specified in Index No. 304. Temporary walkway surfaces and ramps shall be stable, firm, slip resistant, and kept free of any obstructions and hazards such as holes, debris, mud, construction equipment, stored materials, etc.
10. Temporary ramps and temporary crosswalk markings shall be removed with reopening of the sidewalk, unless otherwise noted in the plans. All work and materials associated with constructing temporary curb ramps and temporary crosswalk markings, removal and disposal of temporary curb ramps and temporary crosswalk markings, and restoration to original condition shall be paid for as Maintenance of Traffic, Lump Sum.
11. A pedestrian longitudinal channelizing device shall be placed across the full width of the closed sidewalk.

### SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- (CR) Required Locations For Either Temporary Or Permanent Curb Ramps.
- Lane Identification + Direction of Traffic
- Pedestrian Longitudinal Channelizing Device

### CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT WORKERS OR THEIR ACTIVITIES ENCROACH ON THE SIDEWALK FOR A PERIOD OF MORE THAN 60 MINUTES.

6/9/2014 11:38:22 AM

| LAST REVISION 07/01/13 | REVISION | DESCRIPTION: | FDOT 2015 DESIGN STANDARDS | PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS | INDEX NO. 660 | SHEET NO. 1 of 1 |
|---|---|---|---|---|---|---|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CONSULTING ENGINEERS
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ORMOND BEACH, FL 32174
TEL: (386) 673-7640
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# 146 N. ORCHARD ST RV/TRAILER STORAGE ORMOND BEACH, FL

DETAILS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 1 | 9/2/14 | CITY OF OB RAI | MRZ |

| DATE | 5-13-2013 | SCALE | 1:20 |
|---|---|---|---|
| FILE | 1214.1 | PROJECT | 1214-1 |
| DESIGNER | KAB | DRAWN BY | CTB |

KIMBERLY ANN BUCK LICENSE No 38565 STATE OF FLORIDA PROFESSIONAL ENGINEER
KIMBERLY A. BUCK, P.E. #38565
NOT VALID UNLESS SIGNED & SEALED

SHEET 8 OF 8

48 HOURS
BEFORE YOU DIG
"CALL SUNSHINE"
1-800-432-4770

SCALE: 1"=20'-0"

## SITE PLANTING SCHEDULE

### SHADE TREES

| KEY | QTY | BOTANICAL/COMMON NAMES | HT. | SPR. | REMARKS |
|---|---|---|---|---|---|
| JS | 33 | Juniperus virginiana silicicola<br>Southern Red Cedar | 12'-14' | 6'-8'<br>Shape/Full | Field Grown |
| MG | 12 | Magnolia grandiflora 'D.D. Blanchard'<br>D.D. Blanchard® Magnolia | 11'-13' | 5'-7'<br>Shape/Full | 3"-3.5" Cal<br>65 Gal Cont |
| QV | 6 | Quercus virginiana<br>Live Oak | 14'-16' | 6'<br>Shape/Full | Min 4 1/2" Cal<br>100 Gal Cont |
| TD | 38 | Taxodium distichum<br>Bald Cypress | 10'-12' | 5'-7'<br>Shape/Full | 3" Cal<br>30 Gal Cont |

3 SPECS BY P.M.

### SHRUBS/GROUNDCOVERS

| KEY | QTY | BOTANICAL/COMMON NAMES | HT. | SPR. | REMARKS |
|---|---|---|---|---|---|
| LAN | 340 | Lantana camera 'Dwarf'<br>Yellow/Purple Dwarf Lantana | 6" | 6" | 1 Gal Cont<br>36" O.C. |
| MYR | 110 | Myrica cerifera<br>Wax Myrtle | 36"-42"<br>MIN SEVEN (7) TRUNKS | 36" | 7 Gal Cont<br>42" O.C. |
| VIB | 182 | Viburnum odoratissimum<br>Sweet Viburnum | 36"-42"<br>FULL SHRUB TO BASE | 36" | 7 Gal Cont<br>48" O.C. |
| ZAM | 48 | Zamia pumila<br>Coontie Fern | 30" | 18" | 3 Gal Cont<br>36" O.C. |

3 SPECS BY P.M.

*Address : North Orchard Street*
*Owner : BJ Blare, LLC.*
*Parcel ID : 4241-01-08-0060*

2 REQUIRED NORTH LANDSCAPE BUFFER

TEN-FOOT (10')
THREE-HUNDRED-SEVENTY-NINE LINEAR FEET (379.71 L.F.) BUFFER
LANDSCAPE PLANTING REQUIREMENTS PER ONE-HUNDRED (100) L.F.
THREE (3) TREES (11)
THIRTY (30) 3 GAL SHRUBS (114)
THIRTY (30) GROUNDCOVERS (N/A)

2 *TOTAL SPECIMEN & HISTORIC TREES = 19 SPEC, 3 HISTORIC*
*LIMITS OF CONSTRUCTION = 2.42 AC.*
*SPECIMEN TREES PER ACRE = 9.1*
*SPECIMEN TREES REQ'D TO SAVE = 4/AC OR 10*
*SPECIMEN TREES PROPOSED TO SAVE = 15 SPEC, 3 HISTORIC*

City of Ormond Beach
FINAL APPROVAL
Site Plan Review Committee


ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS
CERTIFICATE No. EB5479
880 AIRPORT ROAD, SUITE. 113
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TEL. (386) 673-7640
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NORTH ORCHARD STREET
RV/TRAILER STORAGE
ORMOND BEACH, FLORIDA
LANDSCAPE PLANTING PLAN

*Sanitary Manhole (Typical)*

*15' Right of way purchase per city of Ormond Beach Resolution No. 2002-34 (Exception)*

*Overhead Lines (Typical)*

*Wetland*

*Edge of Water*

*Top of Bank*

*DITCH*

*50' UPLAND BUFFER LINE*

INSTALL DOUBLE ROW SILT FENCE ALONG WESTERN PART OF SITE

*15' LANDSCAPE BUFFER*

*UNSHADED ZONE "A"*

*ZONE "A"*

*BAHIA SOD (TYP)*

*22'± Asphalt*

*15'± Concrete Walk*

*Metal Rail atop Concrete Block Wall*

*Chain Link Fence 3.2'S.*

*Chain Link Fence 5.3'S.*

*Chain Link Fence 6.7'S, 1.7'W.*

*Wire Fence 3.6'S.*

*Dumpster Pad*

*Concrete Walk*

*2' Concrete Curb*

*Asphalt*

*LINCOLN AVENUE*

*NORTH ORCHARD STREET*

*S 64°08'08" W 981.00'* (981')

*379.71'*

*N 25°51'26" W 259.64'* (259')

*90°00'25"*

*456.42'*

2 REQUIRED LANDSCAPE BUFFER
TEN-FOOT (10')
TWO-HUNDRED-FIFTY-NINE LINEAR FEET (259.64 L.F.) LESS 98LF DRIVEWAY
ONE-HUNDRED-SIXTY-ONE LINEAR FEET (161.64 L.F.) BUFFER
LANDSCAPE PLANTING REQUIREMENTS PER ONE-HUNDRED (100) L.F.
THREE (3) TREES (5)
THIRTY (30) 3 GALLON SHRUBS (48)
THIRTY (30) GROUNDCOVERS (48)

3 NO SHADE TREES SHALL BE INSTALLED WITHIN TEN-FEET (10 LF) OF ANY OVERHEAD POWER UTILITY LINES (TYP)

## GENERAL NOTES

ALL PLANT MATERIAL THAT IS INSTALLED MUST BE FLORIDA NO.1 GRADE OR BETTER ACCORDING TO THE CURRENT GRADES AND STANDARDS FOR NURSERY PLANTS, STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.

ANY VARIATIONS FROM THE APPROVED LANDSCAPE PLAN MUST BE INITIALLY REVIEWED BY THIS LANDSCAPE ARCHITECT. UPON REVIEW BY THIS OFFICE, THE CITY OF ORMOND BEACH MUST APPROVE THE PROPOSED REVISIONS TO THE LANDSCAPE PLAN. THE CITY MUST BE SECURED PRIOR TO INSTALLATION. FAILURE TO COMPLY WITH THIS PROCEDURE MAY RESULT IN REQUIRED MITIGATION AND/OR DELAY OF THIS PROJECT.

ALL FILL DIRT TO BE PLACED IN THE PROPOSED LANDSCAPE AREAS AND BERMS, MUST HAVE A pH RANGE BETWEEN 5.5 AND 7.0, BE ORGANIC IN NATURE, FREE OF ROCKS AND DEBRIS, OR MATCH NATIVE EXISITNG SOILS IN CHARACTER.

CURVILINEAR LANDSCAPE BEDS ARE TO BE EDGED WITH SMOOTH FLOWING CURVES. STRAIGHT-LINE LANDSCAPE BEDS ARE TO BE EDGED IN A STRAIGHT LINE AND MUST BE PARRALLEL TO PARKING LOTS AND STRUCTURES UNLESS INTENTIONALLY DESIGNED TO MEANDER.

ALL OPEN SPACE AREAS ARE TO BE SODDED WITH BAHIA SOLID SOD OR BERMUDA SOLID SOD.

ALL TREES NOT CONTAINED WITHIN A PLANTING BED SHALL HAVE A MINIMUM FOUR-FOOT (4') WIDE MULCH CIRCLE.

ALL EXISTING HARDSCAPE THAT IS TO BE REMOVED SHALL HAVE ITS BASE REMOVED DOWN TO NATURAL FINES.

ALL IRRIGATION BACK-FLOW DEVICES WILL BE VISUALLY SCREENED WITH LANDSCAPING AND PAINTED HUNTER GREEN.

2 REQUIRED SOUTH LANDSCAPE BUFFER

TEN-FOOT (10')
FOUR-HUNDRED-FIFTY-SIX LINEAR FEET (456.42 L.F.) BUFFER
LANDSCAPE PLANTING REQUIREMENTS PER ONE-HUNDRED (100) L.F.
THREE (3) TREES (14)
THIRTY (30) 3 GAL SHRUBS (137)
THIRTY (30) GROUNDCOVERS (N/A)

NOTE:
THE LOCATION OF ALL REQUIRED TREES MUST NOT CONFLICT WITH LIGHTING FIXTURES, SIGNS, UNDERGROUND AND OVERHEAD UTILITIES, FLORIDA POWER EQUIPMENT, FIRE HYDRANTS, ETC.

*Address : 136 North Orchard Street*
*Owner : Underwood Enterprises, Incorporated*
*Parcel ID : 4241-01-10-0060*

LANDSCAPING, EXCEPT GRASS AND GROUND COVER, SHALL NOT BE PLACED CLOSER THAN THREE-FEET (3') FROM THE EDGE OF ANY ACCESSWAY PAVEMENT. ALL LANDSCAPING WITHIN THE TRIANGULAR TEN-FEET (10') AREA SHALL PROVIDE AN OWNER MAINTAINED UNOBSTRUCTED CROSS-VISIBILITY AT A LEVEL BETWEEN TWO-FEET (2') AND SIX-FEET (6').


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(386) 788-3788 FAX 310-8877
SternDesignGroup@att.net
JanStern@SternDesignGroup.com


| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 3 | 06/11/15 | REV LOCATION OF FRONT ENTRANCE | JS |
| 2 | 01/28/14 | REV PER COMMENTS OF 01/14/2014 | JS |
| 1 | 12/20/13 | REV PER COMMENTS OF 11/26/2013 | JS |

| | |
|---|---|
| DESIGNER | KAB |
| DATE | 5-15-13 |
| FILE | 1214.1 |
| SCALE | 1:20 |
| DRAWN BY | CTB |
| PROJECT | 1214-1 |

KIMBERLY A. BUCK, P.E. #89565
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SHEET
LA-1

ALL IRRIGATION HEADS, PIPE, COVERS ARE PURPLE IN COLOR WITH A SIGN DENOTING "REUSE WATER FOR IRRIGATION"

Toro, or equal, Irrigation Spray heads and Nozzles, at 30 p.s.i., with pressure compensating nozzles, installed where shown

(Adjust for Site Compensation)

- 10' Radius Series – Quarter Head @ 0.50 G.P.M.
- Half Head @ 1.00 G.P.M.
- End Strip Series, 4' x 15' @ 0.50 G.P.M.
- Side Strip Series, 2' x 6' @ 0.25 G.P.M.
- Side Strip Series, 4' x 30' @ 1.50 G.P.M.
- Flood Bubbler @ 0.50 G.P.M.

SCALE: 1"=20'-0"

"Rainbird", or equal manufacturer, plastic solenoid valves, EP Series, sized as shown on Landscape Irrigation Plans, with flow control and bleed screw installed in a "meter" plastic valve box (green cover for potable water; purple cover for non-potable water), square 8"x12" top installed in ground. Keep all valves a minimum of four-feet (4') from all walkways, driveways, etc. QTY=5

"Rainbird", or equal manufacturer, plastic solenoid valve, EP Series, sized to fit main line as shown with a 24v. Solenoid for master installed at meter (IF METER IS USED) QTY=0 No Re-Use Meter

"Hunter Pro-C", or equal manufacturer, Electro-Mechanical Station Time Clock, with Solar-Cync Module installed, wall mounted inside appropriate building, or where shown on Landscape Irrigation Plans,or as per Owner with 117v./24v. With LPP-K primary and valve lightning surge protection respectively controller master circuit connected to 110v. Master valve solenoid. QTY= One @ (1) Six-Zone (6)

"Rainbird", or equal manufacturer, PVB Series Dual Check Valve and Backflow Preventer, sized as required, mounted above ground as per local City and/or County Codes. QTY=1

THIS IS A MEDIUM VOLUME IRRIGATION SYSTEM

"Hunter", or equal manufacturer, RAIN-CLIK (Rain Shut-Off Device) installed as per manufacturer's instructions where shown on Landscape Irrigation Plans. QTY= 1

Pipe Connected

Pipe NOT Connected

Pipe in Sleeve

Sleeve Only

Shows connection point of solenoid valve lateral to project main-line

*Address : North Orchard Street*
*Owner : BJ Blare, LLC.*
*Parcel ID : 4241-01-08-0060*

DESCRIPTION

WATER SOURCE 2" Re-Use Irrigation Connection

MAIN LINE 2" Sch 40 PVC Loop

Contractor will connect project Irrigation Main-Line to City Re-Use Irrigation Water Connection where shown on Civil Dwg.

WATERING SCHEDULE -CLOCK A

| PROGRAM | ZONE | G.P.M. | MINUTES | DAYS/WEEK | WATER USAGE |
|---|---|---|---|---|---|
| A | 1 | 29.50 | | 2 | M |
| A | 2 | 29.50 | | 2 | M |
| A | 3 | 30.00 | | 2 | M |
| A | 4 | 29.00 | | 2 | M |
| A | 5 | 30.00 | | 2 | M |
| A | 6 | 29.50 | | 2 | M |

IRRIGATION RUN TIMES WILL VARY MONTHLY DUE TO TEMPERATURE AND RAINFALL. CHECK WEEKLY FOR BREAKS IN PIPES, CLOGGED HEADS, AND DRY/WET SOIL CONDITIONS.

## PROJECT NOTES

Irrigation Contractor shall be responsible for all applicable fees and permits.

All Pipe and Wire under paving shall be placed in Schedule 40 P.V.C. Sleeves for the full pavement coverage length and shall be at least 24" below grade.

Mainlines shall be buried to provide a minimum cover of 18", while all Lateral lines shall have a minimum of 12".

The Contractor should take care to reroute piping as necessary to avoid plant or tree roots.

## GENERAL NOTES

All Sprinklers shall be site adjusted to prevent water overthrow onto building surfaces and walkways.

All Piping downstream of Solenoid Valve to be PR-160 P.V.C.

All Control Wiring to be 14/1 U.F. direct burial.

Install a Hunter RainClik, or equal, rain sensor device. Verify location with Owners Representative.

Shrub body sprinklers may be substituted for Hi-Pops against building(s) at owners discretion.

No irrigation heads may be installed closer than twelve-inches (12") to any building.

All pop-up spray heads located in parking lot areas shall be twelve-inches (12") in height.

Contractor will connect project Main-Line Loop to City Re-Use Line.

Irrigation Contractor shall be responsible for providing an AS-BUILT DWGto the Landscape Architect showing the location of ALL valve placement as so many feet away from a project or site element ( Such as the curb, corner of the building, etc)

All 3.0" Cal trees and above shall have a flood bubbler installed.

THE IRRIGATION SYSTEM SHALL BE DESIGNED TO "STANDARDS AND SPECIFICATIONS FOR TURF AND LANDSCAPE IRRIGATION SYSTEMS, 5TH ed., 2005, FLORIDA IRRIGATION SOCIETY, AS SUBSEQUENTLY REVISED.

ALL IRRIGATION PIPING DOWNSTREAM OF THE SOLENOID VALVE TO BE PR-160 P.V.C. ALL CONTROL WIRING TO BE ¼ U.F. DIRECT BURIAL.

ALL PIPE AND WIRE UNDER PAVING SHALL BE PLACED IN SCHEDULE 40 P.V.C. SLEEVES FOR THE FULL PAVEMENT COVERAGE LENGTH AND SHALL BE AT LEAST 24" BELOW GRADE.

ALL IRRIGATION MAINLINES SHALL BE BURIEDTO PROVIDE A MINIMUM COVER OF 18". ALL LATERAL LINES SHALL HAVE A MINIMUM OF 12".

THE CONTRACTOR SHALL TAKE EXTREME CARE TO ROUTE ALL IRRIGATION PIPING AS NECESSARY TO AVOID PLANT AND TREE ROOTS.

A MEDIUM VOLUME AREA IS ANY ZONE OF SPRAY HEADS. THE RUN TIME ON THESE AREAS SHALL BE SET TO APPLY 0.5" OF WATER PER WEEK. ALL SHRUB AREAS SHALL BE CONSIDERED MEDIUM VOLUM IRRIGATION.

ALL HEADS SHALL HAVE CHECK VALVES AND BE PRESSURE COMPENSATING.

A MAINTENANCE CHECKLIST SHALL BE PROVIDED TO THE OWNER BY THE IRRIGATION CONTRACTOR IT SHALL HAVE A MAINTENANCE SCHEDULE, PROPER IRRIGATION SETTINGS ACCORDING TO SEASON, RECOMMENDATIONS FOR CHECKING THE RAIN SENSOR DEVICE, FILTER CLEANING RECOMMENDATIONS AND INFORMATION ON CURRENT WATER RESTRICTIONS.

THE IRRIGATION CONTRACTOR SHALL SUBMIT A COMPLETED AND ENCLOSED CHECKLIST ON A FORM PROVIDED BY THE PERMITTING AUTHORITY. IT SHALL BE ACCOMPANIED BY AN AS-BUILT SKETCH OF THE IRRIGATION SYSTEM. THIS SHALL BE SUPPLIED WITHIN 30 DAYS OF THE COMPLETION OF THE IRRIGATION SYSTEM OR WITH THE REQUEST FOR FINAL INSPECTION.

KEEP ALL MAIN AND LATERAL LINES OUT OF EXISTING TREE DRIP-LINES. HAND EXCAVATE WHEREVER NECESSARY. THE IRRIGATION PIPES AND SLEEVES SHALL BE TUNNELED UNDER ROOTS WHERE THEY MAY IMPACT THE ROOTBALLS AND/OR DRIPLINES OF EXISTING TREES. EXTREME CARE SHOULD BE TAKEN TO NOT CUT THROUGH ROOTS OF EXISTING TREES.

*Address : 136 North Orchard Street*
*Owner : Underwood Enterprises, Incorporated*
*Parcel ID : 4241-01-10-0060*




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FAX (386) 673-3927


NORTH ORCHARD STREET
RV/TRAILER STORAGE
ORMOND BEACH,FLORIDA
LANDSCAPE IRRIGATION PLAN

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| 3 | 06/11/15 | REV LOCATION OF FRONT ENTRANCE | JS |
| 2 | 01/28/14 | REV PER COMMENTS OF 01/14/2014 | JS |
| 1 | 12/20/13 | REV PER COMMENTS OF 11/26/2013 | JS |

| DESIGNER | DATE |
|---|---|
| KAB | 5-15-13 |
| FILE | SCALE |
| 1214-1 | 1:20 |
| DRAWN BY | PROJECT |
| CTB | 1214-1 |

KIMBERLY A. BUCK, P.E. #38565
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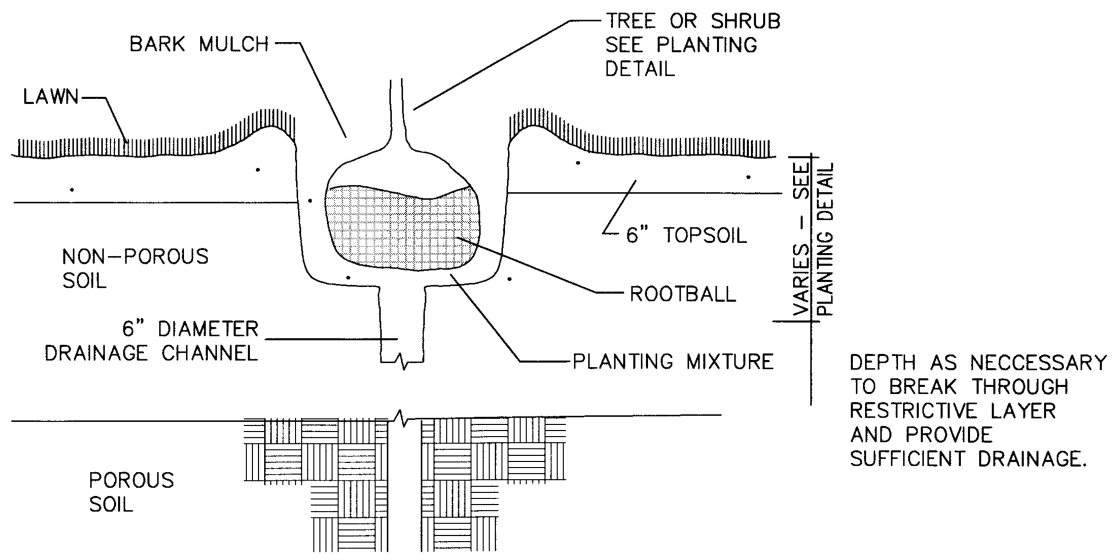
SHEET
LA-2




DRAINAGE TESTING/DRAINAGE CHANNEL REQUIREMENTS

PRIOR TO PLANTING PITS SELECTED FOR TESTING SHALL BE TESTED IN THE FOLLOWING MANNER:

A. DIG EACH PLANTING PIT TO THE MINIMUM SPECIFIED SIZE.

B. FILL PLANTING PIT TWELVE INCHES (12") OF WATER. IF THE WATER LEVEL DROPS FOUR INCHES (4") OR MORE WITHIN FOUR (4) HOURS, THE DRAINAGE IS SUFFICIENT AND DRAINAGE CHANNEL IS NOT REQUIRED. IF HOWEVER, THE WATER LEVEL DROPS LESS THAN FOUR INCHES (4") WITHIN THE FOUR (4) HOUR PERIOD, A DRAINAGE CHANNEL IS REQUIRED.

C. WHERE REQUIRED, THE DRAINAGE CHANNEL MUST EXTEND DOWN THROUGH THE NON-POROUS SOIL AND INTO POROUS SOIL. (SEE DETAIL)

D. ALL MATERIAL REMOVED FROM THE DRAINAGE CHANNEL SHALL BE DISCARDED.

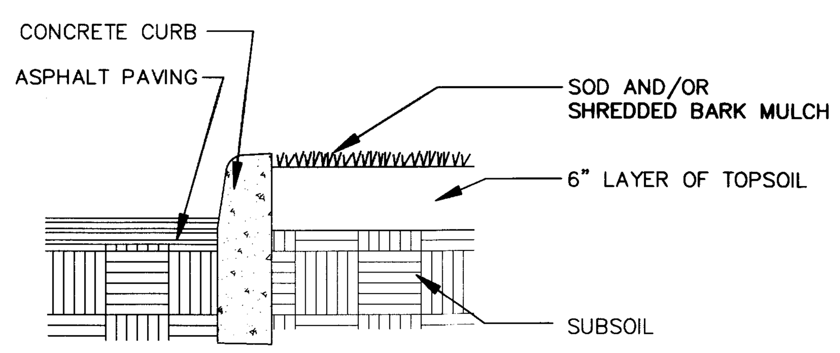
E. WHEN BACKFILLING PLANTING PITS WITH PLANTING MIXTURE, CARE MUST BE TAKEN TO KEEP THE CONSISTENCY OF THE SOIL MIX THE SAME THROUGHOUT THE PLANTING PIT AND DRAINAGE CHANNEL.

## DRAINAGE CHANNEL DETAIL

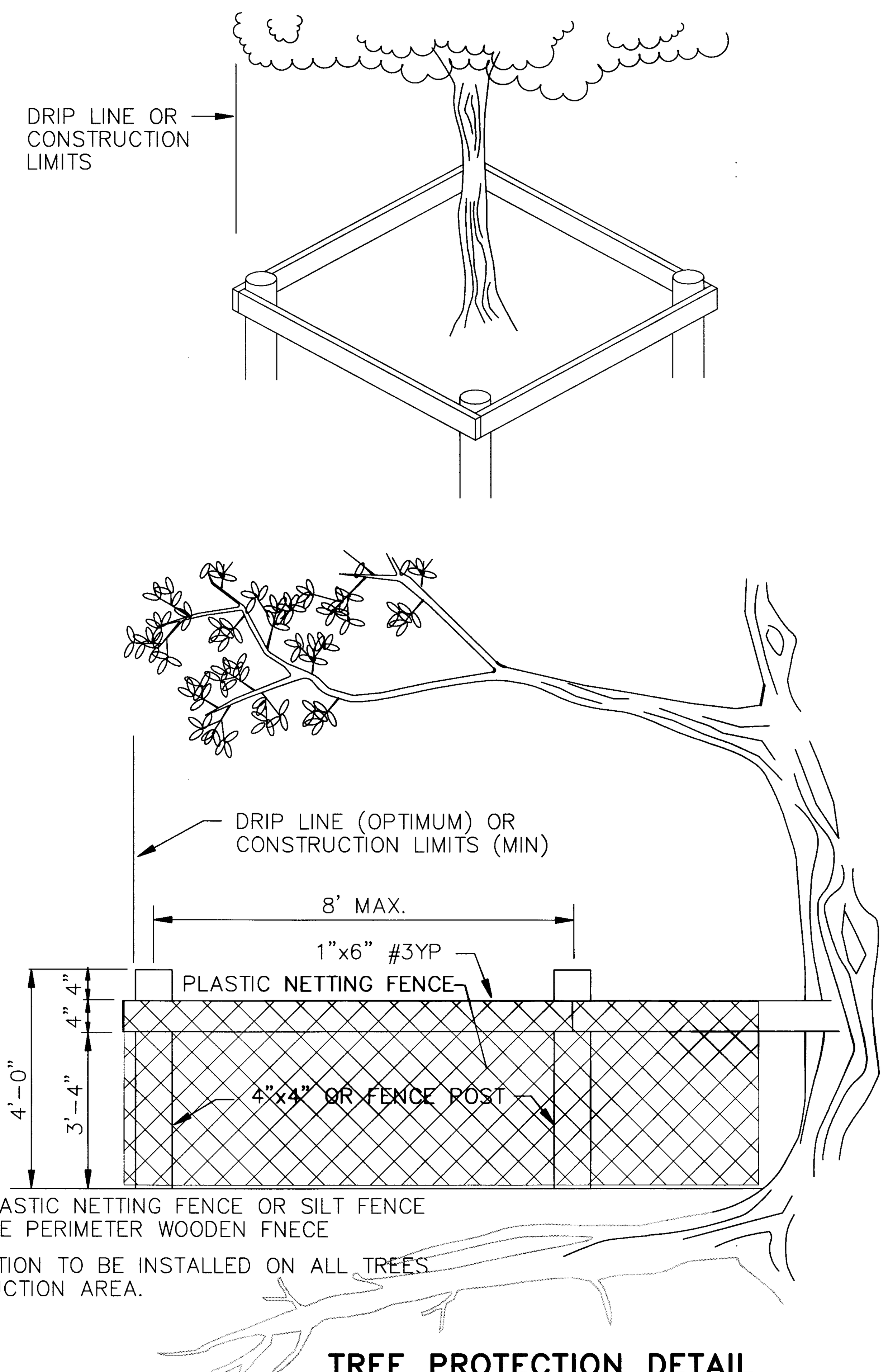
**NOT TO SCALE**

**NOTE:**

TURF AND/OR MULCH IS TO BE INSTALLED SO AS TO BE FLUSH WITH TOP OF ADJACENT CURB.




## SOD/MULCH AT CURB

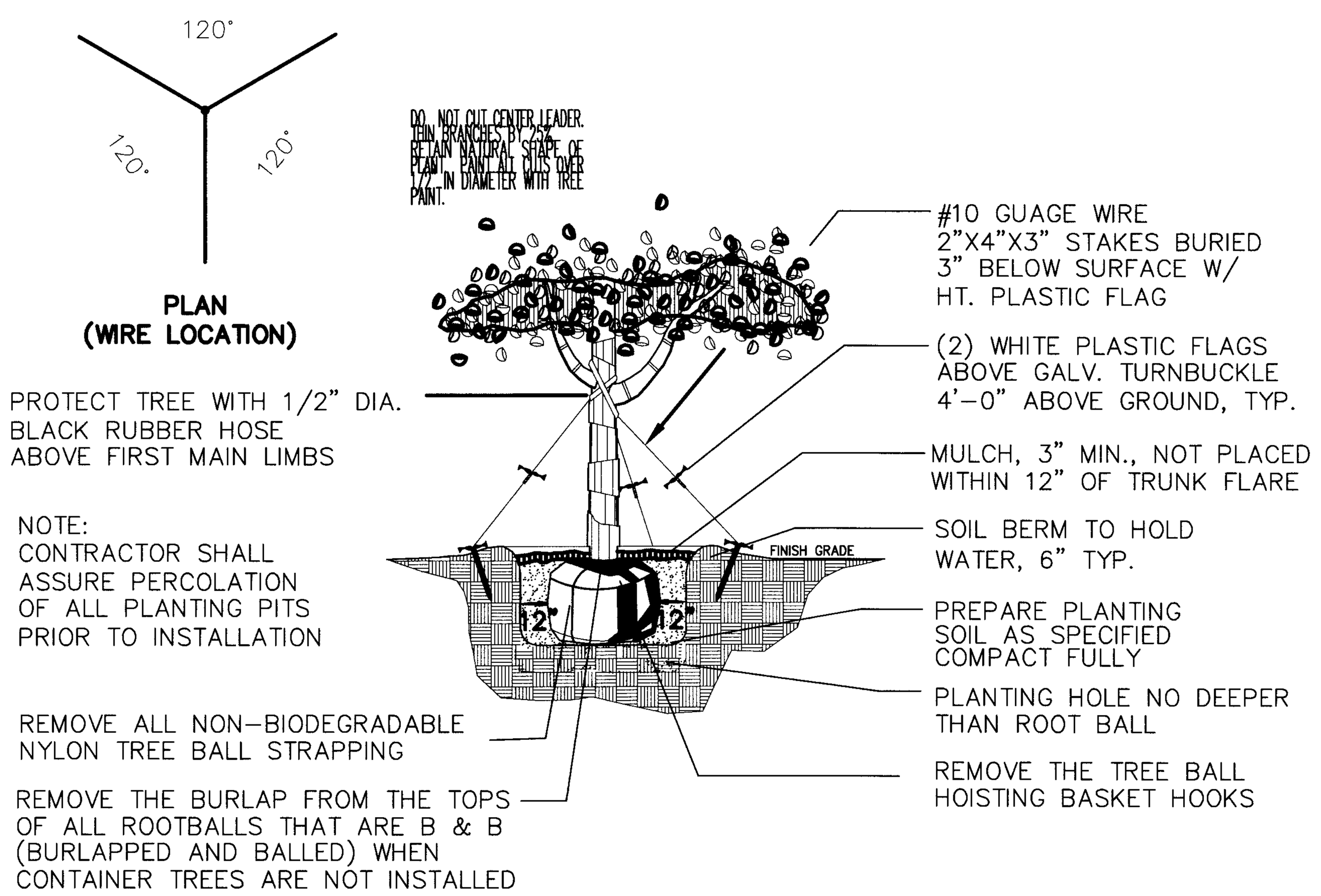



A HIGH VISIBILITY PLASTIC NETTING FENCE OR SILT FENCE TO BE ADDED TO THE PERIMETER WOODEN FNECE

NOTE: TREE PROTECTION TO BE INSTALLED ON ALL TREES WITHIN THE CONSTRUCTION AREA.

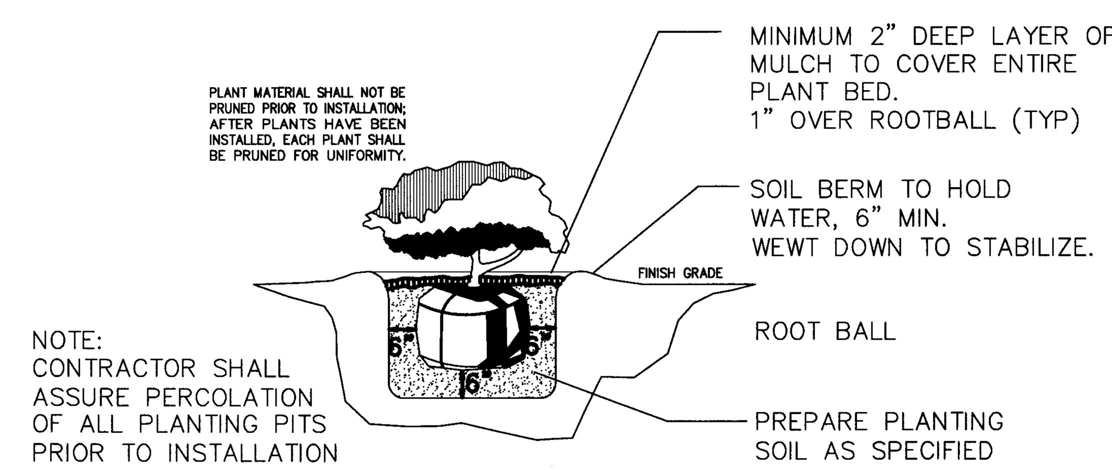
## TREE PROTECTION DETAIL

N.T.S.




## TREE PLANTING DETAIL

**Scale: N.T.S.**

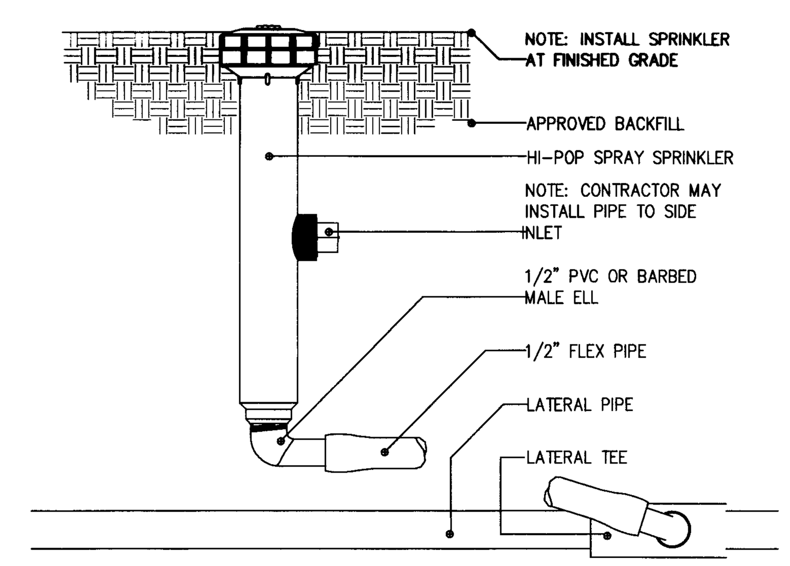



## TYPICAL SHRUB AND GROUND COVER PLANTING DETAIL

**Scale: N.T.S.**

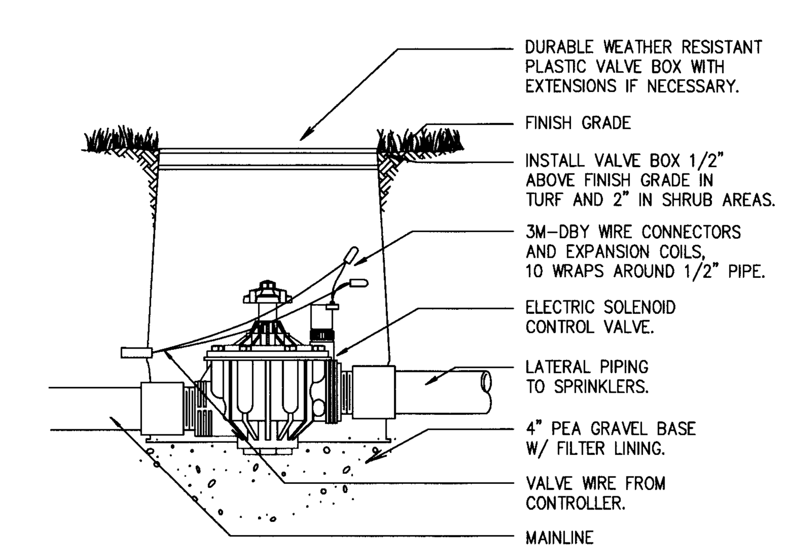
## IRRIGATION NOTES

1. ALL PIPE NOT SIZED TO BE 1/2" CLASS 1120-160 P.S.I. P.V.C.
2. ALL SLEEVES AND MAIN LINE TO BE SCHEDULE 40 P.V.C. PIPE.
3. THE ENTIRE SYSTEM TO BE INSTALLED IN COMPLIANCE WITH ALL LOCAL CODES. CONTRACTOR TO SUPPLY AND INSTALL ALL CHECK VALVES, BACKFLOW PREVENTORS, PERMITS, ETC. AS REQUIRED BY THESE CODES EVEN IF THOSE ITEMS ARE NOT SHOWN ON DRAWINGS.
4. ALL SLEEVES UNDER ASPHALT PAVEMENT TO BE BURIED 24" BELOW PAVEMENT SURFACE. ALL SLEEVES UNDER SIDEWALKS TO BE BURIED 6"-12" BELOW WALK SURFACE. SLEEVE SIZE TO BE 3.5X LATERAL SIZE
5. MAIN LINE LOCATION IS SHOWN SHEMATICALLY. WEHREVER POSSIBLE LATERAL LINES ARE TO BE BURRIED IN COMMON TRENCH WITH MAIN LINE.
6. ALL LOW VOLTAGE WIRING TO BE #14 DIRECT BURIAL WIRE.
7. NO SPRAY HEADS OR NOZZLES IN PLATNING BEDS TO BE PLACED ON RISERS
8. ALL HEADS IN OPEN LAWN AREAS TO BE MOUNTED ON SWING JOINTS.
9. ALL WORK TO BE DONE IN GOOD WORKMAN LIKE MANNER AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
11. ALL LINE LOCATIONS ARE APPROXIMATE. CONTRACTOR TO ADJUST TRENCHING IN FIELD FOR EXISTING CONDITIONS, PLANTINGS AND STRUCTURES.
12. HEAD LOCATIONS ARE APPROXIMATE. CONTRACTOR TO MAINTAIN 100% COVERAGE WITH APPROXIMATELY 50% OVERLAP WHEN MINOR HEAD LOCATIN CHANGES ARE NECESSARY DUE TO FIELD CONDITIONS.
13. ALL ELECTIRCAL WORK NOT LOW VOLTAGE IN NATURE IS NOT PART OF THE IRRIGATION CONTRACT.
14. CONTRACTOR SHALL BE RESPONSEIBLE FOR HTE LOCATION AND EXISTENCE OF ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL VERIFY UTILITIES IN THE FILED. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND MAINTENANCE AND ANY DAMAGE TO EXISTING UTILITIES OR STRUCTURES.
15. THERE SHALL BE A ONE (1) YEAR GUARANTEE ON ALL PARTS AND A NINETY (90) DAY GUARANTEE ON LABOR FROM THE DATE OF FINAL ACCEPTANCE.
16 AT THE END OF 90 DAYS FORM THE DATE OF ACCEPTANCE, THE CONTRACTOR SHALL CHECK AND ADJUST (IF NECESSARY) THE ENTIRE SYSTEM.
17. CONTRACTOR SHALL MARK STATIONS ON THE CONTROLLER PANEL TO CORRESPOND WITH THE ZONE NUMBERS ON THIS PLAN AND SET OPERATING SEQUENCE TO CORRESPOND TO THE NUMBERING.
18. ALL SLEEVES UNDER ASPHALT OR WALKS TO BE INSTALLED PRIOR TO PAVING INSTALLATIONS.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUMP(S) AND WELL(S) SIZES.
20. IRRIGATION CONTRACTOR IS TO VERIFY ALL DRAWINGS AND CHECK FOR DISCREPANCIES AND BRING TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING WITH THE WORK.
21. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR A FINAL FINISHED WORKING IRRIGATION SYSTEM AND SUPPLYING AS-BUILT DRAWINGS.




## TYPICAL HI-POP SPRAY SPRINKLER

**NOT TO SCALE**



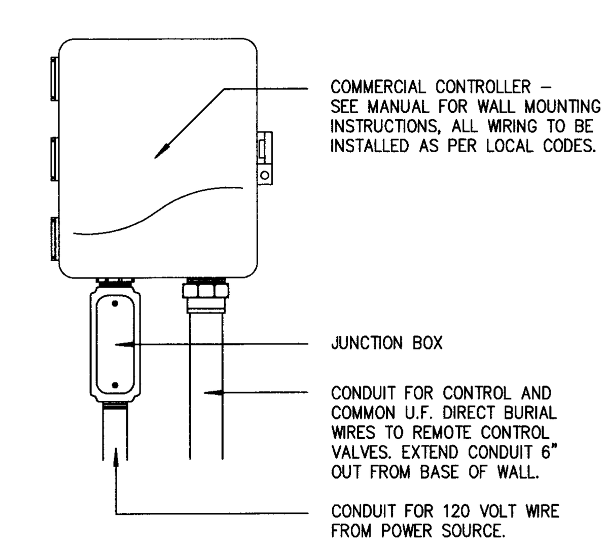

## TYPICAL SOLENOID VALVE

**NOT TO SCALE**

## PLANTING NOTES

1. ALL MATERIALS ARE TO BE FLORIDA #1 OR BETTER, INSTALLED ACCORDING TO THE HIGHEST NURSERY STANDARDS. FOLLOW STATE TREE MATRIX.
2. MULCH IS TO BE 100% PINE BARK , GRADE "A", INSTALLED A MINIMUM OF 3" THICK IN ALL PLANTING AREAS. MULCHED PLANTING BEDS SHALL BE A MINIMUM OF 30" WIDE AND SHALL BE CONTINUOUS WHERE PLANTINGS ARE PROPOSED.
3. ALL AREAS MARKED SOD ON THE PLANS, SHALL BE SODDED WITH 95% WEED-FREE ST. AUGUSTINE "FLORATAM" SOLID SOD. SOD SHALL BE INSTALLED WITH TIGHT JOINTS, BOLLED, AND FERTILIZED. NUTRIENTS SHALL BE ADDED TO THE SOIL AS PER SOIL TESTING RESULTS.
4. BAHIA SOLID SOD SHALL BE USED ON ALL OTHER CONSTRUCTION AREAS SO MARKED AS IN SWALES, RIGHT-OF-WAYS, DISTURBED AREAS, OR OTHER AREAS SUBJECT TO EROSION.
5. LANDSCAPE CONTRACTOR IS TO LOCATE AND VERIFY ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING THE WORK. THE LANDSCAPE ARCHITECT SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO UTILITY OR IRRIGATION LINES.
6. LANDSCAPE CONTRACTOR IS TO VERIFY ALL DRAWINGS AND CHECK FOR DISCREPANCIES AND BRING THEM TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO COMMENCING WITH THE WORK.
7. THE PLANT MATERIALS SCHEDULE IS PROVIDED FOR THE CONVENIENCE OF THE LANDSCAPE CONTRACTOR. SHOULD THERE BE ANY DISCREPANCY, PLANTING PLANS SHALL TAKE PRECEDENCE OVER THE PLANT LIST.
8. NO SUBSTITUTIONS WILL BE MADE AT THE TIME OF BIDDING OR CHANGES OF ANY KIND, SO AS TO PROVIDE FOR FAIR COMPARISONS. NO FURTHER CHANGES ARE TO ME BADE WITHOUT PRIOR CONSENT OF THE LANDSCAPE ARCHITECT.
9. 100% AUTOMATIC IRRIGATION SYSTEM IS TO BE INSTALLED ACCORDING TO THE IRRIGATION PLAN AND SPECIFICATIONS WITH A MINIMUM 60% OVERLAP. ALL IRRIGATION AND ELECTRICAL LINES ARE TO BE LOCATED AT THE PERIMETER OF ALL PLANTERS AND/OR PLANTING AREAS.
10. ALL BUILDING MATERIALS AND LABOR ARE TO CONFORM TO THE FLORIDA BUILDING CODE AND ALSO TO ALL LOCAL CODES THAT HAVE JURISDICTION.
11. ALL PERMIT AND VARIANCE APPLICATION ARE TO BE MADE BY THE CONTRACTOR.
12. PRIOR TO THE INSTALLATION OF THE IRRIGATION SYSTEM, A WATER TEST IS TO BE CONDUCTED ON THE WATER SOURCE TO DETERMINE PH.. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO NOTIFY THE LANDSCAPE ARCHITECT IF THE RESULTING WATER PH. REQUIRES AMENDING PLANT SELECTIONS OR MODIFYING WATER SOURCE.
13. PRIOR TO CONSTRUCTION OF PLANTING BEDS, ALL AREAS ARE TO HAVE SOIL TESTS CONDUCTED TO DETERMINE PH. AND FERTILITY. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO AMEND THE SOIL TO MEET ADEQUATE FERTILITY AND PH. FOR CORRESPONDING PLANT MATERIALS.
14. PRIOR TO THE LAND CLEARING STAGE, THE CONTRATOR SHALL CLEARLY MARK ANY TREE, TREE GROUPS OR SHRUBS TO BE MAINTAINED IN THE PROXIMITY OF ANY AREA WHERE LAND CLEARING EQUIPMENT IS TO BE OPERATED. THE MARKINGS SHALL REMAIN IN PLACE DURING CONSTRUCTION. SAID EQUIPMENT SHALL BE OPERATED IN A MANNER AS OT NOT INJURE OR DESTROY THREE (3) FEET IN HEIGHT SHALL BE FORMED A MINIMUM RADIUS OF SIX (6) FEET FROM THE BASE OF THE TREES OR SHRUBS, AND THE DEVELOPER SHALL NOT CAUSE OR ALLOW THE CLEARING OF EQUIPMENT OR MATERIAL WITHIN THE DRIP LINE OF ANY TREE OR GROUPS OF TREES TO BE MAINTAINED. NEITHER SHALL THE DEVELOPER CAUSE OR ALLOW THE DISPOSAL OF WASTE MATERIAL, SUCH AS PAINT, OIL SOLVENTS, ASPHALT, CONCRETE, MORTAR OR OTHER MATERIALS HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY TREE OR GROUPS OF TREES. NO ATTACHMENT WIRES (OTHER THAN PROTECTION GUY WIRES), SIGNS, OR PERMITS MAY BE FASTENED TO A TREE.
15. REMOVE ALL TAGS FROM INSTALLED PLANT MATERIALS.
16. PLACE TERRA SORB, OR EQUAL, UNDER THE ROOT BALL OF ALL PLANT MATERIALS.
17. ALL TREES ARE TO BE GUYED WITHING "DUCKBILL" ANCHORING SYSTEMS OR AN APPROVED EQUAL.
18.. ALL TREE CALIPERS ARE TO BE MEASURED ACCORDING TO LOCAL CODES AND ORDINANCES. SEE NOTE REGARDING TREE SIZE MATRIX AND CONTAINER.
19. ALL QUESTIONS CONCERNING THE PLAN AND/OR SPECIFICATIONS ARE TO BE DIRECTED TO THE LANDSCAPE ARCHITECT. (386-788-3788)
20. ALL PLANT MATERIAL TO BE GUARANTEED FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM THE TIME OF FINAL ACCEPTANCE. ALL REPLACEMENTS TO BE MADE WITHING TWO (2) WEEKS OF CONTRACTOR NOTIFICATION.
21. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AS-BUILT DRAWINGS DIRECTLY TO THE LANDSCAPE ARCHITECT UPON COMPLETION.

City of Ormond Beach FINAL APPROVAL Site Plan Review Committee




## TYPICAL WALL MOUNT CONTROLLER

**NOT TO SCALE**


THE STERN DESIGN GROUP, P.A.
LANDSCAPE ARCHITECTS • LAND PLANNERS
1685 Promenade Circle, Port Orange, Florida 32129
(386) 788-3788 FAX 310-8877
SternDesignGroup@att.net



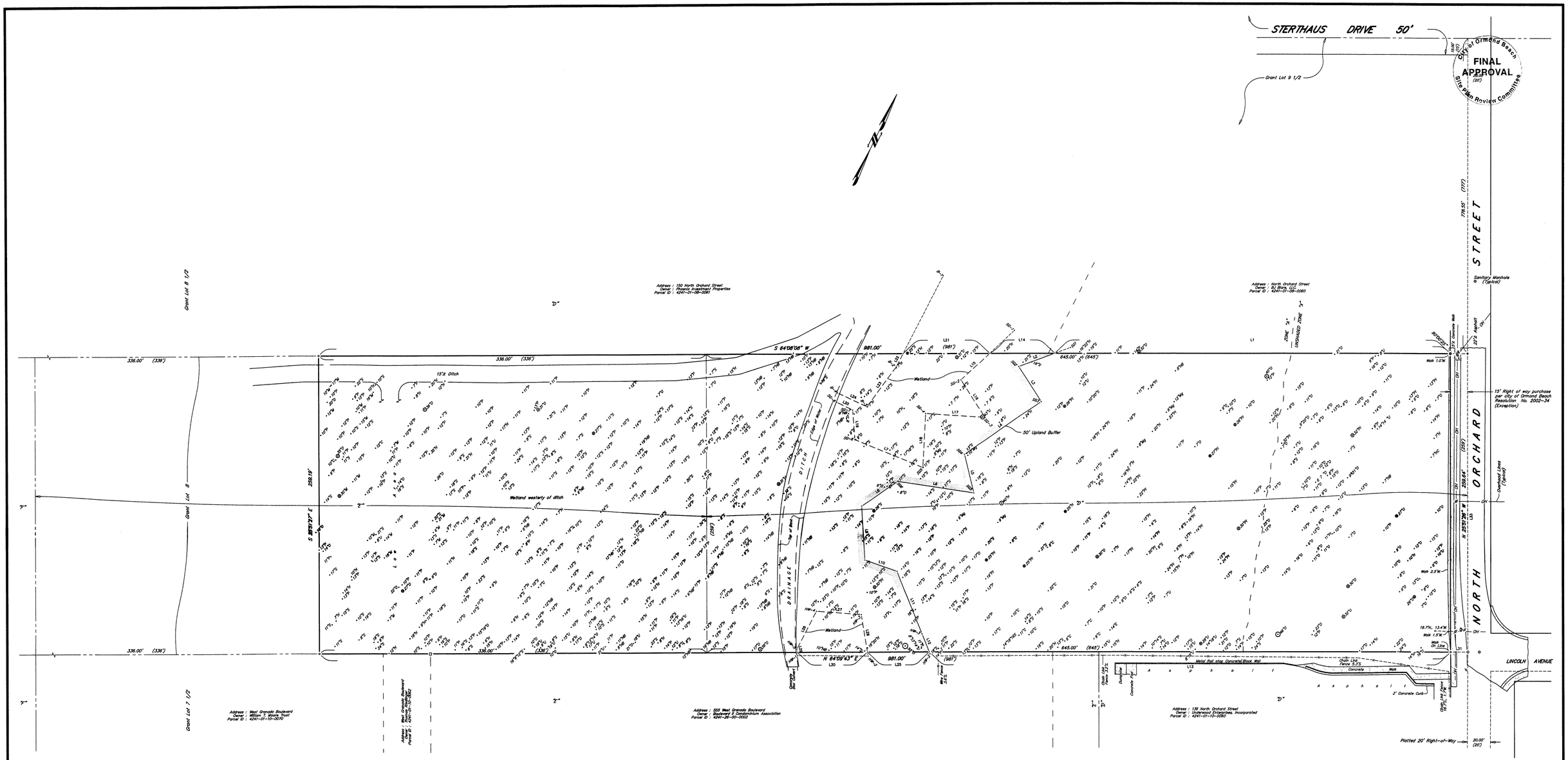
ALANN ENGINEERING GROUP, INC.
CONSULTING ENGINEERS


**NORTH ORCHARD STREET RV/TRAILER STORAGE**
LANDSCAPE PLANTING AND IRRIGATION DETAILS

| NO. | DATE | REVISION | BY |
|---|---|---|---|
| | | | |

| |
|---|
| DESIGNER |
| JS |
| DRAWN BY |
| JS |
| FILE |
| 1214-1 |
| PROJECT |
| 1214.1 |
| DATE |
| 12-20-2013 |
| SCALE |
| AS SHOWN |

SHEET
LA-3 OF 3




**NOTES:** **SCALE: 1" = 40'**

o – 1 1/4" Iron Pipe and Cap #6883 set

● – 3/4" Iron Pipe found

⊙ – Nail and Disk FL6487 found on line & 0.13'W.; also Nail and Disk #2048 found 0.13'W. & 1.07'S. – Witness Corner

□ – 4" x 4" Concrete Monument and Cap #2048 found, 96.40'E. & 0.20'S.

o – 1 1/4" Iron Pipe found

⊕ – Cross set

Parcel Area = 5.842 acres more or less

No overhead or underground features shown except as noted.

Record dimensions are shown in parenthesis, field measurements are not.

Adjoining and/or adjacent right of way lines not verified this survey.

Tree identification believed correct, not certified.

Bearings are assumed, based on the westerly line of Orchard Street shown hereon, bearing N 25°51'26" W.

No search or examination of title has been done on the subject property and absolutely no warranties, expressed or implied are made with regard to the state of title or any other aspect thereof. This Surveyor does not presume the description lines hereon and the ownership lines are coincident.

The term "certificate", "certify" and "certified", hereon, is understood to be the professional opinion of this surveyor and firm which is formulated on his best knowledge, information and belief, and as such, it does not constitute a guarantee or warranty, either expressed or implied. furthermore, this surveyor and firm does not assume responsibility and shall not liable for claims arising from erroneous or incorrect information furnished by the owner, lender, or owner's contractors or others, which is used as a basis to formulate this surveyors opinion.

This survey and plat not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.

There may be additional restrictions and/or other matters not shown hereon that may be found in the public records of this county, Florida.

6-30-08 Wetlands lines and 50' Upland Buffer shown hereon marked by Environmental Services Incorporated, 6-2-08. Area between 50 foot Upland Buffer and the westerly line of Orchard Street shown hereon is 2.629 acres more of less.

⊲ – Valve

✪ – Fire Hydrant

⊼ – Water Valve

⌀ – Wood Utility Pole

⚠ – Telephone Box

←--- – Guy Anchor

⊼L – Wood Utility Pole with Light

| LINE TABLE | | |
|---|---|---|
| LINE | LENGTH | BEARING |
| L1 | 342.75 | S64°08'08"W |
| L2 | 53.38 | S45°51'10"W |
| L3 | 36.31 | S58°23'06"E |
| L4 | 80.28 | S30°01'02"W |
| L5 | 34.23 | S39°24'53"E |
| L6 | 66.84 | S77°45'29"E |
| L7 | 63.80 | N86°41'12"E |
| L8 | 37.83 | S29°44'38"W |
| L9 | 47.84 | S29°05'03"E |
| L10 | 29.53 | N83°49'23"E |
| L11 | 58.34 | S47°30'08"E |
| L12 | 17.22 | S47°28'09"E |
| L13 | 451.78 | N64°09'43"E |
| L14 | 56.25 | S64°08'08"W |
| L15 | 34.04 | S21°35'44"W |
| L16 | 38.67 | S58°11'06"E |
| L17 | 51.56 | S65°05'03"W |
| L18 | 46.31 | N22°50'57"W |
| L19 | 25.26 | N30°08'12"W |
| L20 | 15.49 | N89°23'47"W |
| L21 | 74.98 | S64°08'08"W |
| L22 | 13.04 | S01°37'22"W |
| L23 | 42.80 | S10°35'56"W |
| L24 | 28.21 | S85°00'31"W |
| L25 | 53.72 | S64°08'43"W |
| L26 | 33.22 | S34°56'40"E |
| L27 | 38.97 | N68°37'53"E |
| L28 | 37.08 | N01°28'25"E |
| L29 | 2.91 | N33°27'36"W |
| L30 | 60.75 | S64°08'43"W |
| L31 | 15.00' (15') | N64°09'43"E |
| L32 | 15.00' (15') | N64°08'08"E |
| L33 | 259.59 | N25°01'15"W |

*Tree Legend*

*Bm=Bay*
*C=Cedar*
*Ev=Elm*
*H=Hickory*
*Hh=Hackberry*
*Hc=Hercules' Club*
*M=Maple*
*Mg=Magnolia*
*O=Oak*
*Pa=Palm*
*Pn=Pine*
*Sw=Sweetgum*
*Un=Unknown*

**PLAT OF BOUNDARY SURVEY OF:**

LOT "D" AND THE EASTERLY 336 FEET OF LOT "E", SUBDIVISION OF GRANT LOT 8, ORMOND AS PER MAP IN MAP BOOK 2, PAGE 118, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, EXCEPTING THEREFROM THE EASTERLY 15 FEET THEREOF.

Description in part taken from an abstract of title, by Attorney's Title Insurance Fund, incorporated, dated 7-25-78, No. 211, 927. Exception taken from Official Records Book 4818, page 1410.

The above described property is in zone "A" (no base flood elevation determined) and in unshaded zone "X", per the Flood Insurance Rate Map, Community Number 125136, Panel Numbers 12127C0212 and 0214 G, dated 4-15-02. Said zones are approximately delineated hereon.

**CERTIFICATE:**

This is to certify that the plat delineated hereon is in compliance with the Minimum Technical Standards per Chapter 61G17-6, Florida Administrative Code, pursuant to Section 472.027 of the Florida Statutes.

24 July, 2002
( field date )

6-29-10

John J. Matejka, III, P.S.M. #4002
Licensed Business #6883

Property rechecked, found to be as shown and plat recertified. See sheet 2 for topographic details added.... 6-21-10

Property rechecked, found to be as shown and plat recertified.... 3-23-06

Plat amended to include wetlands information... 6-26-08

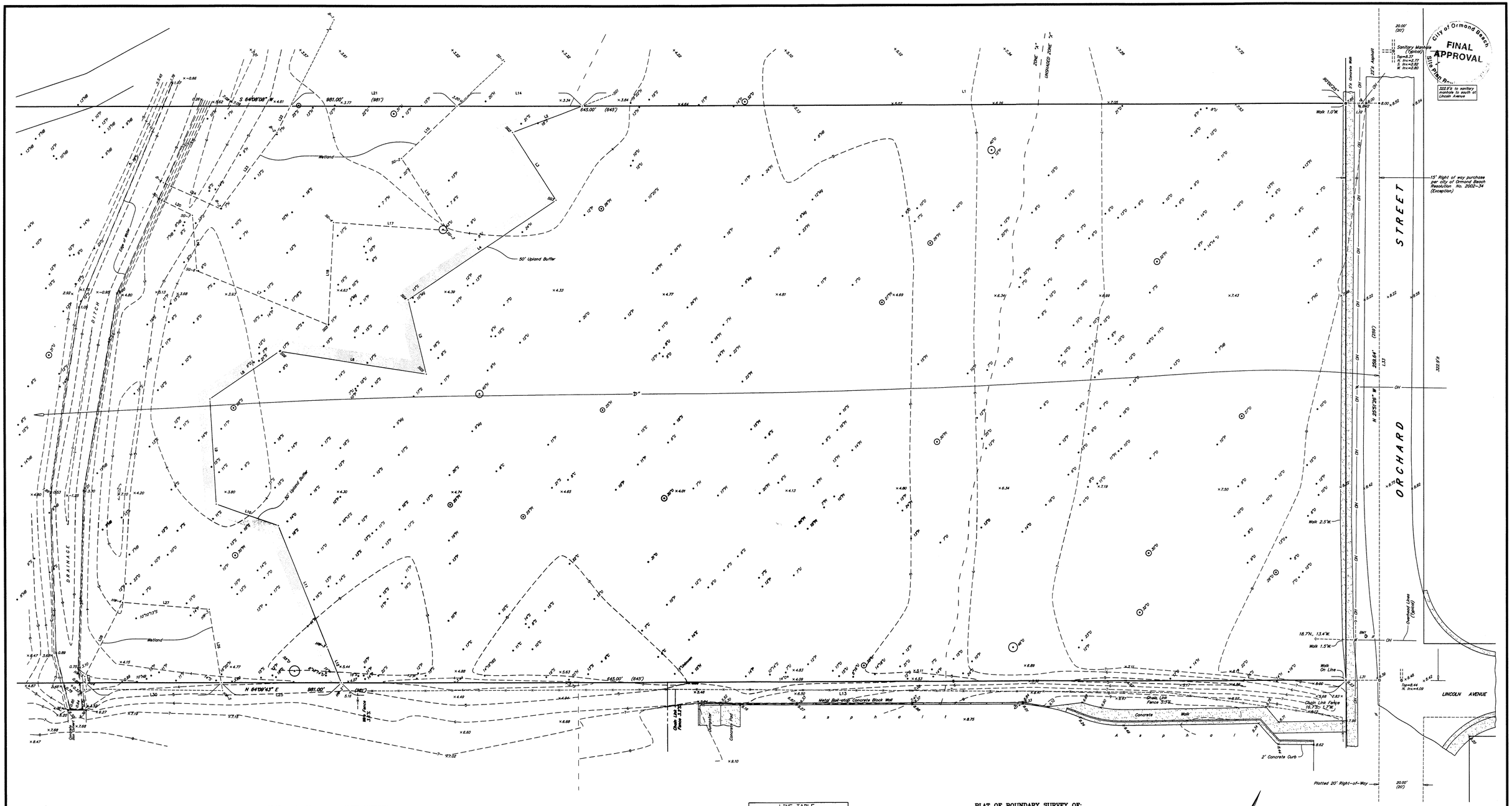
Tree location added & plat recertified... 3-6-03

HENRY YONGE GRANT (2-118), GRANT LOT 8, LOTS "D" AND "E" SHEET 1 OF 2

FOR: PAT BAYLOR
1860 COUNTY ROAD 2006
BUNNELL, FLORIDA

BY: J. J. MATEJKA & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
408 HARVEY AVENUE
DAYTONA BEACH, FLORIDA
JOB #02 15453 PLAT #02X28

*HENRY YONGE GRANT\SUB OF GRANT LOT 8\YG-topo*




**NOTES:**

- ○ – 1 1/4" Iron Pipe and Cap #6883 set
- ● – 3/4" Iron Pipe found
- ⊙ – Nail and Disk FL6487 found on line & 0.13'W.; also Nail and Disk #2048 found 0.13'W. & 1.07'S. – Witness Corner
- □ – 4" x 4" Concrete Monument and Cap #2048 found, 96.40'E. & 0.20'S.
- BM1 – N. Bolt Fire Hydrant Elevation = 10.52'
- BM2 – Nail in Wood Power Pole Elevation = 9.54'
- Parcel Area = 5.842 acres more or less
- No overhead or underground features shown except as noted.
- Record dimensions are shown in parenthesis, field measurements are not.
- Adjoining and/or adjacent right of way lines not verified this survey.
- Tree identification believed correct, not certified.
- Bearings are assumed, based on the westerly line of Orchard Street shown hereon, bearing N 25°51'26" W.
- Approximate area easterly of ditch = 3.30± acres

**SCALE: 1" = 20'**

- ⊕ – 1 1/4" Iron Pipe found
- ⊗ – Cross set
- ✕ – Valve
- Ø – Fire Hydrant
- ⅋ – Water Valve
- ✕ – Wood Utility Pole
- ▲ – Telephone Box
- ←--- – Guy Anchor
- ⅋ – Wood Utility Pole with Light

- Area easterly of 50' upland buffer = 2.63± acres

**NOTES CONTINUED:**

See **Sheet 1** for additional notes and overall details.

This **survey and** plat not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.

There **may be** additional restrictions and/or other matters not shown hereon that may be found in the public records of **this county,** Florida.

6–30–08 **Wetlands** lines and 50' Upland Buffer shown hereon marked by Environmental Services Incorporated, 6–2–08. **Area** between 50 foot Upland Buffer and the westerly line of Orchard Street shown hereon is 2.629 acres more or less.

6–21–10 **Topographic** Details of area easterly of the drainage ditch shown this sheet.

**Elevations** are on National Geodetic Vertical Datum based on U.S. Geodetic Survey monument "T–8", published **elevation** = 4.66 feet.

**BM1:** Site Bench Mark 1;
North bolt fire hydrant; elevation = 10.52'

**BM2:** Site Bench Mark 2;
Nail in wood utility pole; elevation = 9.54'

**Tree Legend**

Bu–Bay
Ce–Cedar
Es–Elm
Ha–Hickory
HB–Huckleberry
HC–Holly
Ma–Maple
Mg–Magnolia
Oa–Oak
Pa–Palm
Pi–Pine
Sw–Sweetgum
Un–Unknown

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| L20 | 15.49 | N88°24'47"W |
| L21 | 74.98 | S84°08'08"W |
| L22 | 13.04 | S01°33'22"W |
| L23 | 42.80 | S10°38'26"W |
| L24 | 28.21 | S89°00'31"W |
| L25 | 53.72 | S84°08'43"W |
| L26 | 33.22 | S34°39'40"W |
| L27 | 38.97 | N66°17'43"E |
| L28 | 37.08 | N01°38'30"E |
| L29 | 2.91 | N33°37'38"W |
| L30 | 60.75 | S84°08'43"W |
| L31 | 15.00' (15') | N64°08'43"E |
| L32 | 15.00' (15') | N64°08'08"E |
| L33 | 299.59 | N25°51'26"W |

**PLAT OF BOUNDARY SURVEY OF:**

LOT "D" AND THE EASTERLY 336 FEET OF LOT "E", SUBDIVISION OF GRANT LOT 8, ORMOND AS PER MAP IN MAP BOOK 2, PAGE 118, OF THE PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, EXCEPTING THEREFROM THE EASTERLY 15 FEET THEREOF.

Description in part taken from an abstract of title, by Attorney's Title Insurance Fund, incorporated, dated 7–25–78, No. 211, 927. Exception taken from Official Records Book 4818, page 1410.

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**CERTIFICATE:**

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24 July, 2002
( field date )

John J. Matejka, III, P.S.M. #4002
Licensed Business #6883

6-29-10

Topographic details easterly of ditch added.... 6–21–10

HENRY YONGE GRANT (2–118), GRANT LOT 8, LOTS "D" AND "E" SHEET 2 OF 2

FOR: PAT BAYLOR
1860 COUNTY ROAD 2006
BUNNELL, FLORIDA

BY: J. J. MATEJKA & ASSOCIATES, INC.
PROFESSIONAL SURVEYORS & MAPPERS
408 HARVEY AVENUE
DAYTONA BEACH, FLORIDA
JOB #02 15453 PLAT #02X28A

HENRY YONGE GRANT\SUB OF GRANT LOT 8\YC-topo