

**PUBLIC WORKS
DEPARTMENT**

A photograph of a long, narrow water channel in a park, lined with potted plants and flowers, leading to a fountain and a building in the background. The channel is filled with clear water and reflects the sky. The potted plants are arranged in a row along the edges of the channel. In the background, there is a fountain with water spraying upwards, and a large, light-colored building with a clock tower. The sky is blue with some clouds.

STANDARDS APPLICABLE TO

**RIGHTS-OF-WAY
AND EASEMENTS**

MAY 1994

AS REVISED THROUGH SEPTEMBER 2025

Table of Contents

INTRODUCTION	1
CHAPTER 1: TITLE, INTENT, AND APPLICATION	3
1. Title	3
2. Intent	3
3. Application.....	3
CHAPTER 2: DEFINITIONS OF TERMS.....	5
1. Definitions.....	5
2. Approvals	9
CHAPTER 3: PERMITS, FEES, AND BONDS	11
1. General Conditions.....	11
2. Construction Drawings Review	11
3. Fees and Bonds	13
4. Permit Expiration	13
CHAPTER 4: GENERAL PROVISIONS	15
1. Permits Required	15
2. Permits from Other Agencies	17
3. No Construction Before Permit	17
4. Pre-Work Meetings	18
5. Emergency Work.....	18
6. Franchised Utilities.....	18
7. General Requirements.....	19
8. Major Construction Projects	34
9. Renovations to Property.....	35
10. Use of Rights-of-Way as Work Area	36
11. Review or Revision of Town Standards	36
12. Regulations Pertaining to Telecommunications Providers.....	36
13. Hurricane Preparedness.....	37

14. Fines.....	37
CHAPTER 5: PAVING AND DRAINAGE - GENERAL REQUIREMENTS	39
1. Permits.....	39
2. Permit Fees and Bonds	39
3. Plans and Specifications.....	39
4. Drainage Standards	40
5. Paving and Drainage Materials	40
6. Installation	40
CHAPTER 6: ROADWAY - TECHNICAL REQUIREMENTS	41
1. Roadways.....	41
2. Pavement Marking/Signing	46
3. Driveways and Driveway Approaches	48
4. Driveways, Abandoned	50
CHAPTER 7: WATER DISTRIBUTION AND SEWAGE COLLECTION SYSTEMS - GENERAL REQUIREMENTS	51
1. Permits.....	51
2. Permit Fees and Bonds	51
3. Plans and Specifications.....	52
4. Water and Sewer System Standards.....	53
5. Water and Sewer Materials	53
6. Sanitary Sewer Service Laterals	54
7. Installation	54
CHAPTER 8: WATER DISTRIBUTION SYSTEM - TECHNICAL REQUIREMENTS.....	55
1. Jurisdiction.....	55
2. Permits Required	55
3. Installation	55
CHAPTER 9: SEWAGE COLLECTION SYSTEMS - TECHNICAL REQUIREMENTS	57
1. Standards.....	57
2. Materials	57
3. Certification and Record Drawings	61

4. Service Connections	62
5. Abandoned Facilities	62
6. Conflict Manholes	62
CHAPTER 10: LANDSCAPING	63
1. General	63
2. Permits.....	63
3. Permit Fees and Bonds	63
4. Plans and Specifications.....	63
5. Standards.....	64
6. Materials	64
7. Installation	64
CHAPTER 11: LANDSCAPE IRRIGATION - TECHNICAL REQUIREMENTS	67
1. General	67
2. Permits.....	67
3. Permit Fees and Bonds	67
4. Plans and Specifications.....	67
5. Standards.....	68
6. Materials	69
7. Installation	69
CHAPTER 12: SPECIAL PROVISIONS	71
1. Construction Access/Temporary Driveways	71
2. Construction Parking & Construction Site Management	71
3. Easements / Rights-of-Way Consent and Use Agreements	75
4. Everglades Island Bridge	75
5. Yard Trash Placement	76
6. Charge for Curbside Trash Placed Prior to the Authorized Collection Date.....	76

List of Appendices

Appendix A

- Standard Details

INTRODUCTION

These "Standards Applicable to Rights-of-Way and Easements within the Town of Palm Beach" ("Standards") have been developed and compiled by the Engineering Division of the Public Works Department of the Town of Palm Beach, Florida. The creation of this manual has been authorized by Ordinance Number 10-94, adopted by the Town Council on July 12, 1994.

These "Standards" were attached to, and made part of, Resolution Number 36-94, adopted by the Town Council of the Town of Palm Beach on November 9, 1994.

These "Standards" became effective November 9, 1994. These "Standards" are meant to amend and supplement those standards previously in effect in the Town's Code of Ordinances. This document will be reviewed and revised from time-to-time by Resolution by the Town Council.

Revised July 9, 1996 by Resolution Number 33-96
Revised May 12, 1998 by Resolution Number 3-98
Revised August 10, 1999 by Resolution Number 17-99
Revised September 17, 1999 by Resolution Number 15-99
Revised October 12, 1999 by Resolution Number 29-99
Revised November 14, 2000 by Resolution Number 55-00
Revised March 12, 2002 by Resolution Number 25-02
Revised June 11, 2002 by Resolution Number 41-02
Revised August 13, 2002 by Resolution Number 58-02
Revised September 9, 2003 by Resolution Number 26-03
Revised April 13, 2004 by Resolution Number 17-04
Revised March 14, 2012 by Resolution Number 10-2012
Revised May 7, 2013 by Resolution Number 76-2013
Revised June 11, 2013 by Resolution Number 95-2013
Revised December 8, 2015 by Resolution Number 195-2015
Revised December 13, 2016 by Resolution Number 212-2016
Revised May 9, 2017 by Resolution Number 060-2017
Revised September 26, 2017 by Resolution Number 131-2017
Revised June 21, 2018 by Resolution Number 144-2016
Revised July 9, 2018 by Resolution Number 083-2018
Revised July 10, 2018 by Resolution Number 101-2018
Revised January 11, 2022 by Resolution No. 001-2022
Revised September 12, 2025 by Resolution No. 107-2025

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CHAPTER 1: TITLE, INTENT, AND APPLICATION

1. Title

- 1.1. These regulations shall be known as the "Standards Applicable to Rights-of-Way and Easements within the Town of Palm Beach," and may be referred to as the "Standards."
- 1.2. The right-of-way within the Town of Palm Beach which these "Standards" apply to are all public rights-of-way within the Town including all Florida Department of Transportation (FDOT) roadways and all roads open for use by the public, including private roads. On FDOT roadways where these "Standards" conflict with FDOT standards, the FDOT standards will prevail. However, if the Town "Standards" contained within have additional requirements that are not in conflict with the FDOT Standards, these requirements shall be met to the greatest extent practical.
- 1.3. Easements shall refer to all dedicated utility easements, whether dedicated by plat or separate recording instrument or prescriptive, or whether said easement is dedicated to one specific entity or all utility companies.

2. Intent

- 2.1. The intent of these "Standards" is to provide for the safe and orderly use and development of the rights-of-way and public or private easements within the Town and to see that the public's best interests are served.
- 2.2. These regulations set forth the minimum standards and have been made as broad as possible to serve as standards of quality to maintain uniformity in the utilization of the rights-of-way and easements. If a specific standard has not been included, the Town will refer to FDOT standards.
- 2.3. Any permit issued prior to the effective date of these "Standards" shall be valid on the terms under which it was issued.

3. Application

- 3.1. With the exceptions noted in Section 3.2, the provisions of these "Standards" do not apply to existing facilities within rights-of-way or easements, but will apply to any extension made after the effective date of these regulations.

However, the Town reserves the right to require replacement of existing infrastructure to current standards when;

- a. The condition of said infrastructure threatens the health, safety, and welfare of the public, or
 - b. Where repeated repairs are causing significant disruption and damage to the Town roadway system.
- 3.2. When the Town initiates an infrastructure or facilities project where roads and/or Town-owned infrastructure is being constructed or reconstructed to Town standards, existing utilities within the right-of-way which conflict with the proposed construction, or are inconsistent with current published or adopted standards, may have to be modified or relocated to meet the new requirements. These changes, if required, will have to be made in accordance with the latest adopted version of these "Standards," or current industry standards, whichever is more stringent. Relocation and/or reconstruction costs shall be at the expense of each respective utility owner.

When a private entity initiates a project that impacts the right-of-way or extension of existing infrastructure, said private entity shall be required to pay for all relocations, adjustments, or extensions of existing utilities in accordance with each utility company policy concerning such matters.

CHAPTER 2: DEFINITIONS OF TERMS

1. Definitions

Whenever the following terms, or pronouns in place of them, appear in these Standards", the intent and meaning shall be construed as follows:

Agreements – Definitions of the various agreements that are required between the Town and the property owner follow below:

Agreement - Stormwater Management Agreement

An agreement signed by the owner acknowledging that the owner is responsible for the proper maintenance and operation of the storm drainage system shall be recorded in the public records of the County prior to issuance of a certificate of occupancy or certificate of completion.

Agreement - Wall Maintenance Stormwater Barrier

An agreement signed by the owner acknowledging that the owner is responsible for satisfying all of the then applicable requirements for the site development and stormwater management system pursuant to Section 86 of the Town's Code. An agreement for the use of a neighbors' wall shall be recorded in the public records of the County prior to issuance of a certificate of occupancy or certificate of completion.

Agreement – Landscape

An agreement signed by the owner acknowledging that the owner is responsible for the proper maintenance of landscape materials installed within and adjacent to major and minor roadways within the Town that shall be recorded in the public records of the County prior to issuance of a certificate of occupancy or certificate of completion.

Agreement - Easement Installation and Removal

An agreement signed by the owner acknowledging that the owner is responsible for the maintenance and potential removal of improvement installed within an easement within the Town that shall be recorded in the public records of the County prior to issuance of a certificate of occupancy or certificate of completion.

Agreement - Installation and Maintenance Agreement

An agreement signed by the owner acknowledging that the owner is responsible for the maintenance of a private improvement installed within the

right-of-way of the Town that shall be recorded in the public records of the County prior to issuance of a certificate of occupancy or certificate of completion.

Best Management Practices (BMPs) - Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollution into the Town's storm water collection system and thence to the waters of the United States. BMPs also include practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Council - The Town Council of the Town of Palm Beach, Florida

Contractor - The duly qualified person, firm or corporation responsible for the construction of the permitted work.

Delivery Permit - A permit secured to off-load equipment and materials made by hand only, with no mechanical or equipment assistance for unloading, and must be made by a box truck (or similar) that is 30 feet or less in total length. Deliveries made under a delivery permit shall take less than two hours and will not block traffic on a major road in Town. The fee for a delivery permit shall be as stated in the Town's most current permit fee schedule.

Driveway Agreement - An agreement by a property owner to restore their driveway which lies within a right-of-way or easement, if said driveway is excavated for public utility or other municipal purposes. This agreement is required only for driveways not constructed of plainly finished concrete and asphalt. The agreement is required to be recorded in the Official Records of Palm Beach County.

Easement - Land dedicated, deeded, used, or to be used for utility, access, or roadway purposes, whether public or private.

Engineer - Engineer of Record (or their representative) whose plans and specifications have been approved by the Engineering Division.

Engineering Division - The Engineering Division of the Town of Palm Beach Public Works Department.

FDOT Standards - This term is defined as both the Standard Plans for Road and Bridge Construction, latest edition, and the Standard Specifications for Road and Bridge Construction, latest edition, as published by the Florida Department of Transportation.

Green Book - The "Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways" published by the Florida Department of Transportation under Rule #14-15.002, FAC. Also commonly known as the "Florida Greenbook."

Major Roadways - Major Roadways are defined as: Bradley Place, Coconut Row north of Royal Palm Way, North County Road, North Lake Way south of Mediterranean Road, North Ocean Boulevard, Slope Trail, South County Road, and South Ocean Boulevard.

Permit - A Town of Palm Beach Public Works Department "Right-of-Way" permit to work within rights-of-way and easements. The following are types of Right of Way Permits:

Construction Parking Permit - Required for any construction related parking that is not confined within the job site. Owner's AND contractor's signatures are required acknowledging receipt of Notice of 3-strike Construction Parking and Construction Site Management Rule.

Dewatering Permit - Required to discharge water from a property or facility into the Town drainage system.

Driveway Permit - Required for alteration, addition or removal of any driveway in the Town. If any portion of the driveway within the right-of-way or utility easement is not plain concrete or asphalt, a "DRIVEWAY AGREEMENT" must be executed by the property owner, recorded with the property and submitted to the Engineering Division before a permit will be issued. Decorative driveways are NOT permitted in the right-of-way where a sidewalk or bicycle path exist.

Excavate in Right-of-Way - Required for digging in or under any pavement, sidewalk, median or easement. The Contractor shall notify the Sunshine State One Call of Florida (SSOCF) service at 811, at least two (2) full working days prior to digging for direct bury and ten (10) days prior to digging for initiating construction of underground construction activities, as required by Florida Statutes Chapter 556 throughout the duration of the construction project. The Contractor will be required to obtain and submit notification from the franchise utility being work on. For Sanitary Sewer Connection or work on the Main a separate Sewer ROW Permit shall be required.

Use of or Work in Right-of-Way - Required for operating all trucks (depending on size), cranes, loaders, and similar equipment on right-of-way. Vehicles greater than 30 feet in length may have difficulty navigating roadways in Town and additional MOT's may be needed. Refer to Traffic Study for more detail.

Sewer Right-of-Way Permit - Required to connect or disconnect these services in right-of-way or easement. Inspection required before backfilling/excavation. An Excavate in Right-of-Way Permit shall also be required to dig within the roadway or easement. A Dewatering Permit may also be required.

Public Works Inspector - An authorized representative of the Engineering Division.

Qualified Applicant - Any current Town franchise, telecommunications provider, or utility regulated by the Florida Public Service Commission, or other entity so authorized by the Town.

Any person, firm, or corporation currently registered to work in the Town and certified by the appropriate County or State Licensing Boards or qualified by a currently certified officer of the firm or corporation to perform the class(es) of work in the rights-of-way and/or easements for which a permit is being sought.

Resident Project Representative - An authorized representative of the Engineer.

Right-of-way - Land dedicated, deeded, used, or to be used for a street, alley, walkway, boulevard, drainage facility, access for ingress or egress, or other purpose by the public, certain designated individuals, or governing bodies. (Florida Statutes, Chapter 177, Section 177.031 (16)). Easements, whether public or private, for roads, utilities, and related purposes shall be considered as right-of-way in the application of these standards. Private roads that provide utility services and/or access to more than one property shall also be considered as right of way in the application of these standards.

Season - That period of time between November 1st and April 30th when work in the right-of-way and easements is prohibited, unless noted elsewhere or specifically approved by the Town.

Standards - The Standards Applicable to Rights-of-Way and Easements within the Town of Palm Beach.

Sub-Contractor - A person, firm or corporation duly qualified in the Town, having a contract with the contractor.

Three "Strike" Rule - Rules and procedures for managing construction parking on public streets and construction site management in order to protect the public's health and welfare.

Town - Town of Palm Beach, Florida

Traffic Control Manual - The "Manual on Uniform Traffic Control Devices" (MUTCD) as published by the U.S. Department of Transportation, Federal Highway Administration and adopted by the Florida Department of Transportation.

Utility - For purposes of this document, any water, sewer, gas, air, drainage, sprinkler or culvert facility and any electric power, telephone, signal, communication, or cable T.V. facility, or operator thereof, serving the public, shall be considered a Utility.

Utility Inspector - An authorized field representative of any utility serving the area where work is performed.

2. Approvals

Where any term such as "approved," "or equal," "or equivalent," "accepted," or "permitted" appears in this document, it shall be construed to mean "by" or "in the judgment of" the "Engineering Division," unless specifically noted otherwise.

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CHAPTER 3: PERMITS, FEES, AND BONDS

Procedures for Obtaining a Permit

The procedure to secure a permit to perform work within the rights-of-way or easements will vary dependent upon the complexity and scope of the job.

1. General Conditions

- 1.1. Public Works Right-of-Way Permits will be issued to qualified applicants only. Permits will be issued to the contractor, subcontractor, material supplier or equipment rental company. Necessary application forms are available on the Town's website (www.townofpalmbeach.com). Applications are to be completed and submitted online through the Town's permitting portal. Applicants will be notified via email regarding the status of their application. The application, when approved by the Town, shall constitute the Permit to occupy the right of way or begin construction in the right of way, as applicable. A sample of the "Application for Permit for Construction in the Public Right-of-Way" can be found on the Town of Palm Beach website at: <https://townofpalmbeach.com/423/Permits-and-Licenses>.
- 1.2. Each contractor, subcontractor, utility company, telecommunications firm, the City of West Palm Beach, and the Florida Department of Transportation shall be required to provide to the Town 24-hour contact information whenever working within the Town right-of-way. The designated individual or individuals shall be required to respond to the Town within a reasonable period of time to address any matters involving work within the right-of-way located within the Town.

2. Construction Drawings Review

- 2.1. All permit applications should be made online through the Town's permitting portal. When application is made, electronic copies of the applicable plans and specifications should be submitted with the application. The application, along with the plans, will be forwarded to the Engineering Division for review. Permits, when approved, shall be distributed through the permitting portal.
- 2.2. For all new construction, and for major remodeling, the Engineering Division requires:
 - a. A topographical survey of the property just prior to starting work.

- b. A topographical drawing showing proposed or modified structures, landscaping and surface grade elevation contours.
 - c. An "as-built" record topographical survey signed and sealed by a licensed land surveyor is to be submitted upon completion of work to the Engineering Division to obtain Public Works sign-off for certificate of occupancy.
- 2.3. For work involving excavation of more than 250 square feet of pavement, work affecting more than one property, requested connections to the Town storm drainage system, plans which will alter elevations or locations of curbs, sidewalks, driveways, utility poles or other utility structures, plans must be signed and sealed by an engineer registered in the State of Florida or those individuals who qualify for an exemption as defined in Chapter 471, Florida Statutes.
- 2.4. New swimming pool construction requires a record survey showing all utilities, easements and rights-of-way, to be submitted with the permit application.
- 2.5. As soon as circumstances allow, (normally within two weeks), the applicant will be advised, in writing, of the approvability of the drawings and what, if any, comments have been made that need to be addressed. If necessary, each drawing noting all required revisions shall be returned to the applicant with an explanatory email correspondence, or an approved permit will be returned to the applicant through the permitting portal.
- 2.6. When the drawings are approved by ARCOM, Landmarks Preservation Commission, Town Council, as may be applicable, application for a permit to construct may be made. Construction drawing approvals shall be void after six months unless an Engineering Division permit to construct the approved facilities is in effect.
- 2.7. In the event that applicable standards, regulations or laws change subsequent to construction drawing approval, but prior to permit issuance, revised plans must be submitted for approval under the new requirements.
- 2.8. Plan approval is based primarily upon the information contained thereon. Subsequent minor revisions may be indicated upon approved drawings and specifications, but such changes must be signed and dated by the Engineer of Record and representatives of the Engineering Division, prior to the contractor proceeding with the revision.

2.9. Engineering Division plan approvals and permits notwithstanding, all installations in public rights-of-way shall be in accordance with requirements of the Green Book, the Traffic Control Manual, and these Standards.

3. Fees and Bonds

3.1. No permit will be issued for work in any right-of-way until the required fees have been paid, and all required Performance and Maintenance Bonds have been posted. Construction shall not commence within any right-of-way until the applicant has obtained all necessary approvals and permits from other authorities/agencies who may have jurisdiction and has notified the Engineering Division of the same.

3.2. The Construction Permit fee, Occupancy fee, Construction Parking fee, Performance and Maintenance Bond, and any other applicable charges, when required, shall be determined by the Engineering Division. Fee and bond amounts shall be based upon rates and conditions as approved by the Town Council. See the Master Fee Schedule for list of applicable charges.

3.3. Permit fees and other applicable fees and charges may be paid in the form of credit card or check. Checks should be payable to the "Town of Palm Beach".

3.4. Performance and Maintenance Bonds may be posted in the form of cash, Certified Checks, Letters of Credit or Surety Bonds. Said bonds shall be irrevocable and shall indemnify the Town Council of the Town of Palm Beach against costs of restoring or maintaining the public rights-of-way due to or arising from failure of the permittee to properly complete the work, to pay fully for labor, material or equipment supplied for the project, or for a failure in the rights-of-way related to the permitted installation, for a period of one (1) year after the permitted work is complete and accepted by the Engineering Division. The Bond or Letter of Credit form must be acceptable to the Town Attorney. The amount of the bond shall be no less than 135% of the estimated value of the work to be performed.

3.5. No bonds shall be required for driveway connections to paved roadways.

3.6. Franchised utility companies, telecommunications providers, and the City of West Palm Beach Utility Department are not required to provide Performance and Maintenance Bonds on projects initiated by themselves.

4. Permit Expiration

4.1. Permits are valid for the dates noted on the permit, unless other provisions have been made with the Engineering Division.

- 4.2. If the permittee wishes to begin, continue, or resume work after permit expiration, a new permit must be obtained with all current conditions and regulations having to be met including new plan approval. A new permit fee will be charged for the uncompleted portion only.
- 4.3. Permits will be marked as Final upon completion of the permitted work and acceptance of the installation, including restoration of the right-of-way by the owner, operator, all regulatory agencies involved, and the Engineering Division.

CHAPTER 4: GENERAL PROVISIONS

1. Permits Required

A right-of-way permit is required for all construction, and most maintenance activities, in the public rights-of-way and easements within the Town of Palm Beach. The Right-of-Way Permit Application can be found on the Town of Palm Beach website at: <https://www.townofpalmbeach.com/423/Permits-and-Licenses>. If the proposed work is in a Florida Department of Transportation (FDOT) right-of-way, an FDOT permit must also be obtained in addition to the Town right of way permit before commencing with construction. Additional circumstances and exceptions are described below.

1.1. Lake Trail and other Bicycle/Walking Paths and Trails

- a. A right-of-way permit is required when construction is to take place on or under the Lake Trail. Additionally, if the path is to be used as an access road or will be blocked to perform construction or landscaping on adjacent properties, a right-of-way permit will be required.
- b. The above conditions are also applicable to the bicycle path along North County Road from Wells Road to Country Club Drive, the bicycle trail adjacent to the Flagler Museum, Whitehall Way, and Coconut Row, and to the bicycle path along South Ocean Boulevard from Sloan's Curve to the southerly Town limits, including all access walkways.

1.2. Landscaping Maintenance

- a. Minor landscaping operations such as hedge trimming, cutting grass, edging, tree trimming, etc., which does not obstruct traffic, and occurs only on minor roads, will not require a permit. However, working along the edge of a roadway will require the placement of a 2'x2' "WORKERS AHEAD" sign and 36" traffic cones. Landscape trimming that occurs on any major roadways requires a right of way permit.
- b. A right-of-way permit is required for landscape work that occurs on major roadways. Furthermore, major landscaping work, which requires vehicles to block any portion of the roadway on minor roads shall also require a permit. This includes, but is not limited to, cranes, tree cranes, bucket trucks, skid-steer loaders, end loaders, backhoes, forklifts, and equipment hauler/transport for any of these. Metal

tracked equipment is prohibited from operating in the right-of-way without a Public Works permit. This includes loading and unloading of the equipment onto or off of an equipment transport vehicle. Advance warning signs and traffic cones will be required.

1.3. Material Deliveries

- a. Delivery of materials which will not block a major roadway or a moving lane of traffic, and will take less than two (2) hours, requires a "delivery permit." Such deliveries may be made by hand only, with no mechanical or equipment assistance for unloading, and must be made by a box truck (or similar) that is 30 feet or less in total length. This permit can be obtained through the permitting portal. Associated fees are listed in the Master Fee Schedule.
- b. Material Deliveries shall not be made outside of the Construction Hours described in this Chapter. Deliveries are recommended to occur between the hours of 10:00am to 2:00pm.
- c. For all other circumstances concerning deliveries, including all crane work and construction equipment deliveries, or use of vehicles greater than 30 feet in total length, a right-of-way permit is required.

1.4 Material Storage in Rights-of-Way

- a. In general, the storage of materials within the road right-of-way is prohibited. Temporary placement of palletized materials may be allowed if a right of way permit is secured.

1.5 Pressure Cleaning/Sandblasting

- a. Permits for pressure cleaning and sandblasting must provide for pedestrian safety and adequate protection from debris, chemicals, and sand from entering the storm drainage system. At the end of each day, the right-of-way shall be swept clean and filter fabric removed from each catch basin cover.
- b. The National Pollutant Discharge Elimination System (NPDES) requirements shall be followed. The Town of Palm Beach is a Municipal Separate Storm Sewer Systems (MS4s). No chemicals can be allowed to enter the Town's Drainage System.

1.6 Surveyors

- a. Surveyors are exempt from the requirement of obtaining right-of-way permits. However, surveying crews are required to place and maintain adequate advance warning signs and cones around equipment in the right-of-way. Where equipment blocks a lane of traffic, adequate signs and cones must be placed for proper traffic control. A flagger may be required. All surveying crew members shall wear orange vests when working in the right-of-way.
- b. A minimum of five-days advance notification needs to be provided to the Public Works Division when surveyor operations are expected to exceed 2 hours in duration and impact major roadways within the Town.

1.7 Tar Kettles

- a. In accordance with Section 42-198 of the Town Code of Ordinances, the use of tar kettles shall be prohibited between November 1st and April 30th, and on all Sundays and legal holidays.
- b. During the times not mentioned above, tar pots shall be located upon private property, if at all possible. If the tar pot must be placed within the road right-of-way, it shall be placed to minimize conflict with pedestrians. A suitable material shall be placed under the tar pot to catch any spills. A right-of-way permit is required.

2. Permits from Other Agencies

Construction shall not commence within any right-of-way until the applicant has obtained all necessary approvals and permits from other authorities/agencies who may have jurisdiction and has notified the Engineering Division of the same. Applicable agencies include, but not limited to, the Florida Department of Transportation, Palm Beach County Public Health Unit, Florida Department of Environmental Protection, Palm Beach County Department of Environmental Resources Management and the Town of Palm Beach Planning, Zoning and Building Department. The applicant shall coordinate with the Town of Palm Beach Public Works Department during the permitting processes with other agencies.

3. No Construction Before Permit

Except for exemptions provided elsewhere in this section, no construction shall be started until a permit for the proposed activity has been granted. Failure to comply will result in cessation of operations and the removal of project-related obstructions

from the right-of-way until compliance is achieved. Penalties for violation of this section shall be as described in the Master Fee Schedule.

4. Pre-Work Meetings

On significant construction projects, at the option of the Engineering Division, the applicant for a right-of-way permit may be required to coordinate a jobsite meeting to discuss a pending construction project. Pre-work meeting minutes shall be taken and distributed to all in attendance by the entity requesting the permit.

5. Emergency Work

Emergency repair work is defined, for the purposes of this manual, as that which must be done immediately upon discovery, in order to protect the public's health, safety, and welfare. The work could include, but not be limited to, excavations, aerial work on pole lines (until Town Wide Undergrounding has been completed) or work in an existing manhole system. In the event of an emergency, as defined above, repair work may be started without a permit upon verbal notification being given to the Engineering Division at (561) 838-5440. If the Engineering Division offices are closed, then notification must be given to the Public Works Department Water Resources Division ON-CALL through (561) 838-5454. Requests for emergency locates after normal business hours shall be made at (561) 838-5454. Written notification describing the emergency work conducted shall be prepared and submitted to the Engineering Division within two (2) business days of the beginning of the emergency. No subsequent written notice need be given for emergency work that did not involve excavation. If the repair work did require excavation, an Excavate in Right of Way Permit application will need to be filed with the Town of Palm Beach after the work is completed. This includes valve box replacements. All work shall comply with these "Standards."

Work that can be scheduled ahead of time will not be considered emergency work.

6. Franchised Utilities

6.1. All franchised utility companies, including West Palm Beach Utilities Department, Florida Power and Light, Florida Public Utilities, and telecommunications providers shall obtain a right-of-way permit for all construction activities which require excavating a road right-of-way or easement. Routine maintenance, service connections, or excavations in easements that are minor in scope, do not impact the flow of traffic, and are backfilled within two (2) business days do not require a permit. For purposes of this section, routine maintenance is defined as activity within an easement which involves work totally confined within the easement, involving replacement only (and not new or additional construction) and, which work

does not require use of the right-of-way or blockage of the right-of-way by utility vehicles. All excavations within two feet (2') of a roadway surface will require a permit. No fee will be charged for permits, however, all applicable penalties will apply for violation of these "Standards". When a franchised utility or telecommunications provider hires a contractor to perform any work on their behalf, the contractor must obtain the right-of-way permit.

- 6.2. Construction plans, signed and sealed by a Florida Registered Professional Engineer, with all other existing utility facilities indicated, will be required for work that requires excavations, placement of new facilities, or relocation of existing facilities. Please be aware that facilities relocated within easements which are initiated at the request of a property owner, as opposed to a utility initiated request, may require sign-offs from adjacent owners. In case of excavation, the drawings shall show other existing utilities.
- 6.3. Detailed maintenance of traffic plans, specific for each job location, will be required. The use of a flagman or off-duty police officers will be required if two-way traffic cannot be maintained or conditions warrant in the opinion of the Engineering Division.
- 6.4. All applicable industry standards must be met. All Town infrastructure, including but not limited to, curbs, driveways, sidewalks, asphalt pavement, base and landscaping, shall be warranted for one (1) year after completion of work.

7. General Requirements

7.1. Availability of Approved Plans and Permit

A Public Works Department permit must be available at the site when work is in progress. A set of plans for the project, bearing the Public Works Department's reviewed stamp must be located on the job-site whenever work is in progress.

7.2. Ownership of Facilities

All facilities within the public right-of-way must be owned and maintained by a public service utility, telecommunications provider, franchised utility, or by a political entity competent to function within the State of Florida, and shall remain the liability of the last operating entity until removed. The only exceptions shall be sanitary sewer laterals (including private force mains), which are privately owned to the sewer main, including the connection fitting on the main. Other exceptions must obtain approval of the Engineering

Division and enter into an Installation and Maintenance Agreement with the Town.

7.3. Protection of Existing Facilities

It shall be the responsibility of all persons utilizing the right-of-way and easements to protect existing Town infrastructure from damage. When damage occurs, full replacement is required. No patching, grinding or skim coats will be allowed on concrete. Asphalt surfaces shall be cut out and patched or overlaid at the option of the Engineering Division.

7.4. Scaffolding

- a. On jobs which require the erection of scaffolding over the sidewalk, a pedestrian walkway must be maintained under said scaffolding. The minimum dimensions of this walkway shall be four feet (4') wide and eight feet (8') high, clear dimensions. Adequate lighting must be installed. Provisions must be made to prevent debris from falling onto the sidewalk or roadway.
- b. The Town's Planning, Zoning & Building Department must approve the structural adequacy of the scaffolding and the electrical lighting plan. Signed and Sealed scaffolding plans shall be required. Scaffolding shall NOT be fastened on or into the sidewalk material. Down systems to the LEGS of the scaffolding for stability are recommended. Engineer of Record needs to review scaffolding installation prior to use.

7.5. Excavation in the Right-of-way or Easements

Before excavating in any right-of-way or easement (including pavement, sidewalks, medians, or curbs) the permittee must cause to be located any and all underground utilities in the vicinity of the proposed excavation. A Public Works Permit is required before the work is started, except for emergency work, which can be filed after the emergency work is performed. To obtain locations for all utilities underground that may include electric, telephone, gas, water, cable TV or Town of Palm Beach utilities that include sanitary sewer, storm sewer, street lighting, and traffic control call SUNSHINE STATE ONE CALL at SUNSHINE 811 from Monday thru Friday between the hours of 6:00 a.m. and 5:00 p.m. A minimum of forty-eight (48) hours notice is required for any field locate. Requests for emergency locates after normal business hours shall be made at (561) 838-5454.

7.6. Exfiltration Trenches

The use of exfiltration trenches (french drains) for stormwater retention and swimming pool drains are encouraged. The seasonal high water table elevation to be used for design calculations shall be 1.5' NAVD, as determined by the South Florida Water Management District.

7.7. Underground Facilities

- a. All underground and in-ground facilities in the right-of-way or easements reasonably expected to be subject to vehicular traffic shall be designed and installed so as to safely sustain any legal vehicular loads that might be placed upon them.
- b. Prior to placing any underground facility in the public right-of-way, unless otherwise approved by the Engineering Division, the permittee shall remove all muck and other deleterious material existing within the zone extending from the ground level to the horizontal plane three feet (3') below the facility's intended location and from the vertical plane two feet (2') beyond one side of the facility's intended location to the vertical plane two feet (2') beyond the opposite side of facility's intended location. Backfill shall be with 3/4 inch washed rock up to the bottom of the new facility. If so, doing this would endanger an existing facility, contractor shall de-muck only that area which can be done without such endangerment. In these situations, the Engineer can submit an alternate recommendation for muck/deleterious material removal and backfilling to the Engineering Division for review.
- c. In areas to be paved, underground utility lines not yet in service shall be tested by the maintaining agency after the roadway base has been constructed before the wearing course(s) have been placed, to determine serviceability. All damaged or defective portions of such facilities shall be replaced or repaired and re-tested, and the roadway base restored by said maintaining entity. At that point, the facility shall again be tested for serviceability. This procedure shall be repeated until the facility is determined to be serviceable, after which the wearing course(s) may be placed.
- d. Utilities located underground shall, to the extent reasonably possible and practical, be maintained as underground lines.

7.8. Utility Facilities Additions and Adjustments

- a. The location or relocation of utility facilities within the Town of Palm Beach shall be made under the supervision and with the approval of the Town of Palm Beach Director of Public Works or their designee. Utilities shall be located or relocated so as to interfere as minimally as possible with traffic over streets, alleys, sidewalks, bridges, and public areas within the Town. The Town reserves the right to require aesthetic improvements and/or landscape screening.
- b. In the event a property owner within the Town requests the relocation of existing above ground utility facilities, that owner shall obtain a written consent from adjacent property owners, as directed by a representative of the Town's Public Works Department. "Adjacent property owners" may include properties across a street.

7.9. Utility Structure Sight Screening

All above ground utility structures shall be sight screened with appropriate landscaped material as directed by Town Staff.

7.10. Driving Pipe Under Existing Pavements (Trenchless Methods)

- a. Each underground utility crossing of paved roads shall be made by trenchless methods, where feasible, unless an alternate method is approved by the Engineering Division. Proposed open cuts shall be shown on the drawings submitted for approval.
- b. When a pipe is driven through the earth under pavement, jetting, or the use of air or water forced into direct contact with the earth shall be prohibited. Pipe driving shall leave no voids in the underlying earth. This requirement does not prohibit the use of air hammers for driving.
- c. Plans for trenchless operations shall include both plan and profile. All existing and proposed facilities shall be shown. A description and/or sketches of the equipment staging/operating areas required for the installation shall be submitted with the permit application.
- d. Extraction of Pipe from Bore: The extraction of pipe or conduit from beneath any roadway, generally, is prohibited. If circumstances exist that the pipe must be removed, the roadway must be excavated and restored. Alternate methods of bore hole stabilization shall be submitted to the Engineering Division for review. Prior approval must

be received from the Engineering Division for any pipe/conduit extractions.

7.11. Notice Required

If required by the permit conditions, one business day's minimum notice must be given to the Engineering Division prior to the start of construction. Two (2) business days' notice is required when scheduling any required tests and/or inspections.

7.12. Inspections, Tests, and Certifications

When indicated by the permit, inspections, and tests necessary to ensure construction in conformity with the plans and specifications as approved by the Public Works Department, shall be made by or under the direct supervision of an engineer registered in the State of Florida, or by those individuals who qualify to perform such services under Chapter 471 of the Florida Statutes. The Registered Engineer or individual authorized under Chapter 471 of the Florida Statutes shall carefully observe and inspect all portions of the permitted installation sufficiently to determine that the contractor has substantially complied with all approved plans and specifications related thereto, and shall so certify at the completion of the work.

7.13. Supervision of Construction

- a. The permittee shall keep sufficient competent supervision on the site while work is in progress to ensure that the work is being performed properly, in accordance with permit conditions, and in a safe and orderly manner.
- b. The Town may require, on significant utility projects, that the utility hire and pay for a third-party project inspector who would report to the Town to oversee the work for compliance with the plans, specifications, and applicable Town regulations (Reference Resolution No. 10-2012)

7.14. Performance of Tests

No labor, material, or equipment required for testing of facilities, shall be furnished by the Engineering Division. The contractor shall perform the test(s) in the presence of the Engineer and an Engineering Division representative. If the Engineering Division fails to witness a properly scheduled test, the certification of the Engineer of Record can be submitted for review and acceptance.

7.15. Reports

Any reports relating to construction progress, tests, or other matters which may be required by the Engineering Division, the FDOT, City of West Palm Beach, the Palm Beach County Public Health Unit, or the Engineer of Record shall be sent to the Engineering Division without charge. All final tests and inspections shall be witnessed by a representative of the Engineering Division, unless the Engineering Division fails to attend such properly scheduled event, in which case the certification of the Engineer of Record can be submitted for review and acceptance.

7.16. Interruption and Restoration of Services

Adequate provision shall be made for the safe, continuous operation of any utilities, drainage facilities or sanitary sewer facilities encountered during construction. If an interruption of service is required, notification and approval must be received from the affected agency and the Engineering Division. If a facility is damaged during construction, the affected utility shall be notified immediately, and all such services and structures shall be satisfactorily restored to the owner's specifications upon completion of the work.

7.17. Erosion Into Roadways and Drainage Systems

- a. During construction and demolition activities, suitable methods must be employed to prevent wind and water carried dirt and debris from being deposited onto the roadway or into the storm drainage system. At the time of building/right-of-way/demolition permit application, the contractor shall submit an Erosion Control Plan for review and approval by the Public Works Department. In accordance with the National Pollutant Discharge Elimination System (NPDES) Program administered by the Florida Department of Environmental Protection (DEP) for the United States Environmental Protection Agency, Best Management Practices (BMPs) shall be employed on every construction project to prevent wind and/or water carried sediment from entering the Town's municipal storm drainage system. Upon the approval of the Engineering Division, the downstream catch basin(s) shall be covered with filter fabric and in the case of open throated catch basins, approved inlet protection shall be placed to block the openings. During light rainfall events, the contractor will be responsible to restrict all debris from the storm system. This includes material caught on the filter fabric or debris clogging the catch basin. The filter fabric shall be removed from all catch basins prior to a heavy rainfall event and replaced after the rainfall event.

- b. For excavations off the roadways, whether on public or privately-owned land, BMPs shall be employed to prevent sediment from reaching the Town roadway system. Typical methods employed include grassed berms, staked turbidity screens and/or excavated areas filled with 3/4 inch stone. The selected BMP shall be described with the permit application.
- c. Contractor shall immediately clean up the right-of-way of any dirt or debris which has migrated from a construction site. It shall be the responsibility of the offending party to clean any storm or sanitary sewer system of dirt and debris which has migrated from a construction site. An Illicit Discharge from the site Violation may be issued for each occurrence.

7.18. Disposal of Water from Excavation

- a. Permit applications for dewatering must state the purpose of the dewatering request; (i.e. construction of a new swimming pool, swimming pool repair/resurfacing, excavation for subgrade construction, underground utility repair, etc.). No water may be discharged directly onto the street. All water must be discharged through a closed conduit and/or flexible hose to a discharge point designated by the Public Works Department. Pumping systems must be flushed on-site to produce only clear water before being connected to the discharge system leading to the Town storm water system. Water used to flush the system must be retained on-site. A Public Works inspector must be on the job site to observe start-up of dewatering discharge to the Town storm water system.
- b. Adequate provision shall be made for the satisfactory disposal of water resulting from de-watering or pumping operations or from encounter with water in any manner. All pumps utilized for dewatering shall meet the applicable Town Noise Ordinance standards. Generally, gasoline and diesel driven pumps are not to be used outside the normal construction working hours. The method of handling or disposing of such water shall be to pipe the groundwater directly into a catch basin. The discharge line should follow the gutter line to the catch basin. If the discharge line crosses a driveway, a flexible hose section must be installed at said driveway that a passenger vehicle can reasonably traverse. The pipe must be securely attached to the catch basin and the flow directed so as to not cause flooding of the pavement around the inlet.

- c. When a discharge line crosses a public sidewalk that has a parkway, the discharge line shall be placed under the sidewalk. When a discharge line crosses a sidewalk/curb combination, an Americans with Disabilities Act (ADA) compliant pedestrian ramp must be constructed over the discharge pipe.
- d. Minor discharges and/or those dewatering operations lasting four (4) hours or less may be relieved of direct piping to an inlet.
- e. Water discharging to the Town storm drainage system or directly into the intracoastal waterway must meet all applicable Federal, State and local water quality standards. The contractor shall be responsible to clean any Town structures or pipes into which dirt and debris washes as a result of the discharge activities. Fines levied by any regulatory agency, due to a contractor's permitted or unpermitted activity, shall be paid by said contractor whose operation caused the violation.
- f. In compliance with South Florida Water Management District (SFWMD) regulations, during a water shortage alert issued by the South Florida Water Management District, a certified test of groundwater to establish chloride content is required prior to discharging of groundwater into a Town storm sewer system during dewatering operations. Water chloride levels of 250 mg/l or less cannot be discharged to tidal waters without specific approval from the SFWMD.

7.19. Maintenance of Traffic / Temporary Traffic Control (TTC)

- a. When a plan is required for maintenance of traffic, the contractor shall adhere to such plan as approved, in strict accordance with the provisions of the FDOT Standards and the Manual of Uniform Traffic Control Devices, throughout the construction period. Temporary measures must be taken, if necessary, to provide a minimum of one lane of traffic in each direction on each affected road at all times, unless specific permission is obtained from the Engineering Division to deviate from this requirement. Contractor must also provide for pedestrian and vehicular access to each home and place of business or assembly abutting the affected right-of-way.
- b. The right-of-way must be maintained by the contractor in safe and drivable condition until the permitted work is complete and the right-of-way is restored and accepted for maintenance by the Engineering Division.

- c. The provisions of this section shall be in effect under all weather conditions, twenty-four (24) hours per day, every day, from the commencement of work until final acceptance by the Engineering Division, except in time of emergency, when the provisions of Section 5 of this chapter shall apply.
- d. Detailed maintenance of traffic plans, specific for each job location, will be required. Maintenance of Traffic plans must be certified by someone with an Advanced Maintenance of Traffic certification for impacts to major roads. Said plan must be approved by the Engineering Division prior to the issuance of a permit.
- e. The use of a flagman or off-duty police officers will be required if two-way traffic cannot be maintained, if a moving lane of traffic must be blocked, or if conditions warrant in the opinion of the Engineering Division.
- f. Detours/Lane Closures: Work at certain locations on major arteries within the Town will require the use of off-duty police officers to assist with traffic control. The owner/contractor shall be responsible for paying for off-duty police assistance. Please contact the Palm Beach Police Department at 838-5454 to obtain rates of pay per hour, minimum time required and to schedule police assistance.

7.20. Dust

Provisions must be made to control dust. If blowing dust becomes a problem, as determined by the Engineering Division, the job must be shut down until the problem is corrected. This includes clean up of public and private property impacted by the blown dust.

7.21. Job-Site Safety

All permitted work in the right-of-way must be done in strict accordance with the provisions of the Occupational Safety and Health Administration (OSHA) Regulations, and all other applicable codes. The Contractor shall be solely responsible for job-site safety.

7.22. Demolition

- a. The Planning, Zoning & Building Department issues permits for demolition. A copy of the Demolition Checklist can be found on the Town of Palm Beach website at: <https://www.townofpalmbeach.com/423/Permits-and-Licenses>. Prior

to obtaining a demolition permit, a plot plan of the property and a written description of the work is required to be reviewed by the Engineering Division. The plan will indicate what measures will be taken to protect the pavements, curbs, medians, and sidewalks in the right-of-way adjacent to the property; and the measures that will be taken for erosion control to prevent migration of debris, dirt, dust, and water from the property to the right-of-way and storm drainage system. See also Sewer Cap-off in Chapter 7 for further details.

- b. Any damage to the roadway, sidewalk, or rights-of-way shall be immediately repaired. A Right-of-Way Excavate permit will be required to make the repairs. Failure to make repairs in a timely fashion can result in fines per day until repairs are made. Fines shall be in accordance with the Master Fee Schedule.

7.23. Removal of Pavement, Drives, Sidewalks, Curbs and Gutters

- a. Edges of permanent type pavement shall be pre-cut straight, clean, and square beyond any damaged base area, including well point locations. When the removal of sidewalks, curbs or gutters is necessary for construction, they shall be removed in full sections (entire flags) or a minimum of five (5) feet in length, and all broken edges cut smooth by use of a suitable power saw or other appropriate means.
- b. All applicable industry standards must be met for new or restored Town infrastructure. All Town infrastructure, including but not limited to, curbs, driveways, sidewalks, asphalt pavement, base and landscaping, shall be warranted for one (1) year after completion of work.

7.24. Disposition of Excavated Materials

Broken pavement and other debris shall be removed from the site as soon as practical, unless otherwise directed by the Engineering Division. Excavated materials shall not be stockpiled in the right-of-way during construction without specific approval of the Engineering Division. All excess materials shall be removed from the work site and disposed of legally by the permittee at his own expense.

7.25. Bracing and Shoring

Sheeting, bracing, etc., shall be used as required to support the sides of the excavation and to prevent any movements which can in any way alter the grade of or injure the facility being installed, diminish the width of excavation or otherwise injure or delay the work or endanger personnel, adjacent pavements or other structures. Safety procedures shall be followed, and adequate protection shall be furnished to all personnel as required by OSHA. All sheeting or bracing which is not left in place shall be removed in a manner that will not endanger the work, personnel or adjacent structures.

7.26. Traffic and Utility Controls

- a. Excavation for pipe, structures or cable laying operations shall be conducted in a manner that will cause the least interruption to traffic. To the extent possible, fire hydrants, valve boxes, traffic control boxes and traffic signing shall be left unobstructed and accessible during the construction period. When such obstruction is unavoidable, it must be held to the minimum, and the contractor shall give sufficient notice to the affected parties to allow other provisions to be made.
- b. Contractor shall provide notice to the Town of anticipated obstructions and shall not continue work which causes obstructions until instructed otherwise by the Town.

7.27. Backfilling and Compaction

- a. Embankments

Backfill material shall be placed in layers not to exceed six (6) inches in thickness, with each layer carefully compacted to 98% of the maximum density, per AASHTO T-180 and tested, before placing succeeding layers. Swale areas need only be compacted to 95% of maximum density, per AASHTO T-180. Density tests shall be taken at intervals and depths as approved by the Engineering Division. Copies of required testing results shall be forwarded to the Engineering Division.

- b. Pits and Trenches

- i. After a structure, cable, conduit or pipe is acceptably installed, tested and approved, backfilling shall be done with approved material.

- ii. In dry trenches, backfill material shall be placed evenly and carefully around and over the pipe in six-inch maximum layers, each layer being thoroughly compacted, until reaching the top of the pipe. From the top of the pipe to one foot of cover above the of the pipe, place and compact backfill per the Stage 2 requirements shown on the trench details in these Standards. The remaining trench portion up to the pavement base shall be back-filled in layers not exceeding six (6) inches with each layer being compacted to 98% of the maximum density, per AASHTO T-180 and tested at intervals of 100 feet maximum before placing succeeding layers.
- iii. Swale areas shall be compacted to 95% of maximum dry density, per AASHTO T-180, and testing shall be at the Public Works Inspector's discretion. All materials shall be able to pass through a two-inch ring.
- iv. Laboratory testing for the optimum moisture and maximum soil density shall conform to the specifications of AASHTO T-180 (Modified Proctor). Restoration of the roadway shall be in accordance with the standard details.
- v. At the contractor's option, with the approval of the Engineer of Record, and with the Public Works Inspector's approval, after the compacted backfill has reached the center line of the newly installed pipe or conduit, the remaining trench backfill may be placed to one foot above the ground water level without interim compaction, provided that the water is allowed to rise in the trench to its natural level and then be pumped down to the pipe invert, at least twice. The balance of the trench backfill must then be placed and compacted as described for dry trenches.

c. Narrow Trenches

Narrow trenches, not greater than twelve inches (12") in width, may be backfilled with excavatable flowable fill, 200 psi max., to a point coincident with the bottom of the existing roadway base layer. The remainder of the trench shall be filled to a point two inches (2") below the finished roadway surface with a non-excavatable flowable concrete mixture as defined in the FDOT Standards, placed wet and allowed to set overnight. The top two inches (2") of the trench may be filled with sand when the non-excavatable flowable fill is wet. The sand shall be removed on the following day and the permanent asphalt

patch placed and rolled in, unless other provisions are made with the Engineering Division.

7.28. Detection Aids

After non-metallic utilities have been installed, but before backfill has progressed beyond the top of these facilities, approved electro-magnetic location devices or metallic tape shall be placed in the locations specified hereinafter. A metallic cable or pull-wire installed with the conduit at time of construction or as otherwise approved shall satisfy this requirement.

7.29. Restoration of Right-of-way

- a. The entire work area utilized for the performance of any permitted work shall be restored by the permittee to the condition equal to or better than that which existed before work began. Non-excavatable flowable fill roadway base is recommended on small patches. It is required on narrow trenches less than twelve (12) inches in width.
- b. Each roadway patch shall have the roadway milled and surfaced for a distance of 50 feet on each side of a cut for at least the full width of the affected lane, or a minimum of 10 feet wide, or as directed by the Engineering Division. Should this area exceed 50% of any block, then the entire block shall be milled and resurfaced. Where multiple blocks are involved, the milling and resurfacing shall be continuous through the intersections between the blocks. Where the distance between milled areas is 50 feet or less, that area must also be milled and resurfaced.
- c. Where cuts are made in front of an individual property for services to said property, the milling and resurfacing shall be limited to the area directly in front of the property. A minimum milling and resurfacing of 100 feet must be made, unless the property is less than 100 feet in which case the entire property frontage and portions of the neighboring properties is to be milled and resurfaced. Paving operations shall not terminate within an existing driveway opening. This requirement pertains to all entities that excavate the Town's roadways.
- d. Exceptions to these requirements may be granted by the Director of Public Works when a scheduled Town project will be excavating the roadway in the affected area within one (1) year. The Town will require a bond equal to the cost of the milling and resurfacing plus 35%. If the Town does not complete a project within the area, the Town will require the property owner to perform the required work and the bond will be

released. If the work is not performed by the property owner, the Town will utilize the bond to complete the required milling and resurfacing.

- e. In circumstances where the Town does complete a project within the area, the property owner shall be responsible for the actual cost of the milling and resurfacing of the area covered by their bond. The rates shall be based on the bid price of the contract as approved by the Town Council. The Town will release the remainder of the bond to the property owner at the time of project acceptance.
- f. An annual report of planned infrastructure improvements shall be submitted to the Town by all entities operating and maintaining infrastructure within the Town. The report shall cover a five (5) year period. The Town reserves the right to amend the schedule of planned infrastructure improvements as may be required.
- g. Annually, the Town shall notify entities operating and maintaining infrastructure within the Town of the Town's planned improvements and roadway resurfacing plans.
- h. Paved sections shall conform in type, shape, elevation, and texture with adjacent paved areas and shall be of at least equal quality. Design mixes for flexible pavements shall be subject to approval by the Engineering Division. All damaged or undermined areas of existing pavement, not previously removed, shall be removed and restored in the specified manner. Where pavement is removed for installation, maintenance, or removal of any underground facility, restoration shall be in accordance with the standard details. Equipment shall not travel over loose rock fragments or other hard material lying on sections of pavement which are not to be removed.
- i. Swale areas, medians, sidewalks, driveways, etc., shall be restored in kind to a condition equal to or better than that which was disturbed.
- j. All benchmarks and Permanent Reference survey markers disturbed during the course of construction shall be replaced at an equal or better level of precision, at the permittee's expense, by a Professional Land Surveyor registered in the State of Florida.
- k. All pavement striping impacted by the work shall be restored as described in Chapter 6 of these Standards.

7.30. Completion of Work

Until the right-of-way is fully restored to its original, or better condition following construction/excavation activities, there will be a per day charge as described in the Master Fee Schedule for each day past the permit expiration date until restoration is complete. This condition includes restoration of sidewalks, medians, landscaping, and roads. This also includes all benchmarks and Permanent Reference Survey Markers disturbed during the course of construction, as described in this Chapter

7.31. Temporary Pavement Patches

Excavated roadways shall be patched with asphalt for vehicular traffic at the end of each work day, unless otherwise approved by the Engineering Division.

7.32. Construction Dumpsters

- a. Placement of construction dumpsters within the road right-of-way is prohibited. This prohibition includes the temporary placement during pick-up and delivery of dumpsters. The fine for violation shall be as described in the Master Fee Schedule. Damage to any Town infrastructure (i.e., curbs, sidewalks, roadways, landscaping, drainage facilities, etc.), shall be repaired by the contractor who secured the dumpster service.
- b. A right-of-way permit is not required for delivery or pick-up of dumpsters. However, if the truck must block or hinder traffic during pick-up and delivery, a flagman with a DOT approved vest and flag is required for traffic control.

7.33. Obstructions

No obstructions that will impede traffic or create a hazard to the public are allowed in public or private right-of-way. Placement of concrete pyramids, concrete buttons, speed bumps, posts, stones, or boulders within the Town's rights-of-way is prohibited.

7.34. Record Drawings

Upon completion of construction and prior to final inspection or commencement of any bonded maintenance period, the Engineer of Record shall furnish to the Engineering Division "Record" drawings certified in conformity with all applicable Standards. Record Drawings are to be

submitted through the Town's permitting portal. Specific requirements for various types of installations are detailed in these Standards.

7.35. Abandoned Facilities

All exposed facilities and such underground facilities as may be designated by the Engineering Division that are abandoned within the public right-of-way, shall be removed by the owner of the facility unless other provision is approved by the Engineering Division. Any abandoned facility allowed to remain in the right-of-way shall continue to be the responsibility of the owner or operator by whom it was last used. Such owner or operator shall be liable for all costs arising from the presence of the abandoned facility in the rights-of-way. Conduits/Pipes that are 3" or larger in diameter shall be grout filled if not removed.

7.36. Construction Hours

- a. The days and hours of construction are as follows:

The permitted days and hours of construction are described in the Town of Palm Beach Code of Ordinances, Section 42-199. Please note that no equipment shall be started or deliveries made outside the work hours described in this ordinance.

- b. Seasonal Restrictions applicable to construction in the Right of Way:

Construction and construction related activities in the right of way in all zoning districts is generally not permitted during the months of November, December, January, February, March, and April of each year.

Work is prohibited in the road rights-of-way during the above-described time periods unless the operation is considered emergency work as described in this Chapter.

8. Major Construction Projects

- 8.1. Florida Department of Transportation, City of West Palm Beach Utilities Department, franchised utility providers, telecommunication providers and other authorized utility providers are required to follow the Town's construction project communication process as stated below for all major construction projects. Projects or a group of projects affecting the Town rights-of-way or easements will be designated "major" by the Town Manager.

- 8.2. Florida Department of Transportation, City of West Palm Beach Utilities Department, franchised utility providers, telecommunication providers and other authorized utility providers shall provide notice for every major construction project in rights-of-way and easements to all property owners of record adjacent to the project area by first class mail not less than thirty (30) days prior to the commencement of work. Notification should include information on the nature of the work and contact information of the contractor and associated subcontractors.
- 8.3. Florida Department of Transportation, City of West Palm Beach Utilities Department, franchised utility providers, telecommunications providers, other authorized utility providers, and permit holders of designated major construction projects are required to submit a status report to the Director of Public Works once a month. The status report shall include progress made during the previous month on the major construction project and anticipated progress for the next month. Status reports may be mailed, hand delivered, faxed, or sent electronically, but must be received by the Director of Public Works by the first of each and every month for the duration of the project.
- 8.4. Each contractor, subcontractor, utility company, telecommunications firm, the City of West Palm Beach, and the Florida Department of Transportation shall be required to provide to the Town twenty-four (24) hour contact information whenever working within the Town rights-of-way. The designated individual or individuals shall be required to respond to the Town within a reasonable period of time to address any matters involving work within the rights-of-way located within the Town.

9. Renovations to Property

- 9.1. When fifty percent (50%) or more of a property area is being redeveloped, or 50% of the roadway frontage is affected by the improvements, such as a driveway relocation, the sidewalk, driveway, and curbs must be inspected by the Public Works Department for deficiencies. The property owner will be responsible to correct any deficiencies noted by removing and replacing to bring the affected sidewalks, driveway, and/or curbs up to current Town standards.
- 9.2. When the cost of any reconstruction, rehabilitation, addition, or other improvement of a structure exceeds fifty percent (50%) or more of the market value of the structure, it is the responsibility of the owner to verify the pipe size and condition of the sewer lateral to determine if upgrades are required to support the new improvements. Additionally, the Water Resources Division will inspect all laterals serving the property that exist in the right-of-way or

easement. If any laterals are found to be deficient after inspection, the owner will be responsible to replace the deficient laterals at their sole expense.

10. Use of Rights-of-Way as Work Area

It is not permitted to utilize the rights-of-way for fabrication of any materials for use on a construction project being undertaken on private property. All such work activities shall take place on private property.

11. Review or Revision of Town Standards

11.1. Any request for review or revision of these "Standards" shall be made to the Director of Public Works in writing, stating the item to be considered and setting forth the objections and suggestions for revision. The Director shall respond in writing as soon as possible thereafter, but in any event, within 60 days after receipt of such request.

11.2. Appeal to Town Council

If any individual or entity requests a review of these standards as provided in the Section above and disagrees with the decision of the Director of Public Works, said individual or entity may appeal to the Town of Palm Beach, Town Council.

12. Regulations Pertaining to Telecommunications Providers

12.1. Special Provisions

This section contains special provisions pertaining to Telecommunications Providers. Certain construction activities will be permitted when new service (the establishment of service to a newly constructed building) is required to be established during time periods in which construction in the right of way is prohibited, as described in Section 5, within the guidelines outlined in this Section. These special provisions do not relieve a Telecommunications Provider from complying with all other Standards, Town Ordinances, Resolutions and policies.

- a. A single lane of traffic may be blocked to work in manholes. Telecommunications Providers must give seven (7) days notice to Town and residents on the street.
- b. Excavation may occur on residential east-west streets and easements between Royal Palm Way and Royal Poinciana Way, east-west streets and easements north of Sunrise Avenue, and east-west streets and

easements south of Worth Avenue after providing seven (7) days notice to residents on the street.

- c. Excavations may be approved in rights-of-way of major streets which will not block vehicular traffic or pedestrian traffic for the purpose of providing additional services and for maintenance of lines that have problems.
- d. Telecommunications Provider will discuss need with staff and can proceed if staff agrees. Otherwise, Telecommunications Provider will seek Town Council permission at next regularly scheduled meeting.
- e. Work by Telecommunications Providers, other than emergencies, will not be permitted during the following periods:
 - i. Thanksgiving weekend
 - ii. December 15th through January 2nd
 - iii. President's Day Weekend
 - iv. Three (3) days before and after the beginning of Passover
 - v. The week before Easter Sunday
- f. Refer to Town of Palm Beach Code of Ordinances, Section 116, Telecommunications and Section 42-199, Hours for Construction Work, for more detailed requirements.

13. Hurricane Preparedness

Upon issuance of a hurricane watch by the National Weather Service, all projects underway within the road rights-of-way and easements shall be immediately secured. All excavations shall be backfilled, all filter fabric/inlet barriers shall be removed, and all paved/concreted areas that are disturbed shall be temporary paved. All construction materials, equipment, barricades, and signage shall be secured on-site or removed off-site. Once the jobsite is secured, call the Town Public Works Department at 838-5440 to report your jobsite safe and secure. All construction vehicles, equipment, and trailers must be removed from the roadways.

14. Fines

- a. Failure to comply with the Engineering Division Standards will result in fines as described in the Master Fee Schedule, until the deficiency is corrected.

- b. All fines must be paid within ten (10) business days of formal written notice by the Town. Failure to promptly pay fines may result in the Town refusing to issue building/right-of-way permits on future applications.

CHAPTER 5: PAVING AND DRAINAGE - GENERAL REQUIREMENTS

1. Permits

- 1.1. Permits for construction, modification or maintenance of roadways, sidewalks, drainage or related facilities shall be granted only after the following requirements have been met:
 - a. Paving and drainage plans must have been reviewed and be deemed approvable prior to submittal of application for permit. Review and approval of concept Paving and Drainage plans during the ARCOM and/or Landmarks Preservation Commission approval process does not constitute a right of way and/or easement permit approval. A right of way and/or easement permit application must be submitted subsequent to the ARCOM and/or Landmarks Preservation Commission approval, as applicable.
 - b. The provisions of Chapter 3 of this document.

2. Permit Fees and Bonds

Permit fees and bonds will be charged in accordance with the provisions contained in these Standards. See Chapter 3, Permits, Fees and Bonds for more information.

3. Plans and Specifications

- 3.1. Electronically submit plans signed and sealed by a Professional Engineer licensed in the State of Florida to the Engineering Division for review and approval via the permitting portal.
- 3.2. All plans shall be submitted electronically white backgrounds and black lines. Color renderings and photography provided on the plans is also acceptable. In addition to the proposed project, plans shall show all existing facilities as well as all other planned facilities sufficiently to permit assessment of the compatibility of the proposed work with the existing systems.
- 3.3. Plans must be submitted electronically via the permitting portal, formatted for 24x36 or 11x17 sheet sizes, provided that scale requirements are met. Exhibits may be provided in 8.5x11 or 8.5x14 sheet sizes.

- 3.4. Any general area layout shall be prepared at a scale of 100 feet or less to the inch. Detailed plans shall be prepared at a scale of 40 feet or less to the inch. Design drawings shall include both plans and profiles where the facility being installed is not replacing an existing utility of the same size and location, or if there are other facilities in the area and a profile is warranted to detail potential conflicts. When profiles are drawn, they shall be to the same horizontal scale as the plan.
- 3.5. Dimensions of right-of-way and easement widths shall be indicated.
- 3.6. All plans shall show suitable legends.
- 3.7. New pavement shall be indicated by notes and/or light shading.
- 3.8. Cross-sections and/or typical sections, or proposed road and drainage construction, shall show dimensions, materials and purposes of all existing (to remain) facilities as well as all proposed facilities within the right-of-way.
- 3.9. Elevations of the existing project area as well as the proposed project elements shall be clearly provided.

4. Drainage Standards

Drainage plans and designs must meet the requirements of the Town of Palm Beach Code of Ordinances, Chapter 86, Planning, Article III, Stormwater Management and comply with the Town's adopted level of service as described in Town of Palm Beach Code of Ordinances, Chapter 30, Consistency and Concurrency, Section 30-114, (a) Drainage and (b) Management Procedures, as well as these Standards.

5. Paving and Drainage Materials

- 5.1. Materials specified within the design of Paving and Drainage systems shall be clearly stated on the Plans and Specifications.
- 5.2. Paving and Drainage materials shall meet the requirements provided in these Standards. In the absence of a specific material or product requirement listed in these Standards, the FDOT Standards shall apply.

6. Installation

- 6.1. The applicable provisions of Chapters 3 and 4 of these "Standards" shall govern the work in the right-of- way.

CHAPTER 6: ROADWAY - TECHNICAL REQUIREMENTS

1. Roadways

1.1. Minimum Design Criteria

As a minimum, roads and/or streets and related facilities shall be designed in substantial accordance with the latest edition of the "Manual of Minimum Standards for Design, Construction and Maintenance for Streets & Highways" and the Utility Accommodation Guide, as published by the State of Florida, and the provisions of the applicable sections of Chapters 106 and 110 of the Code of Ordinances, Town of Palm Beach, Florida.

1.2. Construction Criteria

Construction materials and methods shall meet the requirements of the latest edition of the Florida Department of Transportation "Standard Specifications for Road and Bridge Construction" and supplements, except as modified herein.

1.2.1. Temporary Facilities

- a. Temporary facilities, unrelated to any on-going construction in the right-of-way, and intended to provide an essential service for a period of time not to exceed one (1) year, may be constructed in the right-of-way, contingent upon Engineering Division approval of project plans and specifications, and issuance of Public Works Right-of-way Permit. There will be no relaxation of safety requirements, but lighter duty construction will be allowed, where public interests will not suffer.
- b. In cases where temporary facilities must be constructed to provide or maintain an essential feature around portions of a public right-of-way for public safety or convenience during construction, such temporary facility must be clearly drawn in sufficient detail on standard size drafting sheets, and submitted to the Engineering Division for review and approval prior to implementation.

1.3. Typical Sections

At the option of the design engineer, sketches of proposed typical sections may be submitted to the Engineering Division for approval prior to beginning the preparation of plans, and shall show or note all existing conditions or facilities that might influence a proper engineering evaluation of the proposed project.

1.4 Subgrades

- a. All subgrade material supporting the roadway and shoulders shall have a minimum LBR of 40. The subgrade shall be a minimum of 12" thick and be compacted to 98% of maximum dry density as per AASHTO T-180. Where unsuitable materials exist below a proposed roadway, demucking or installation of filter fabric will be required to provide adequate support of the roadway. Alternative subgrade designs, and designs over areas that are not proposed to be fully demucked shall be submitted to the Engineering Division for review and approval.
- b. Stabilized subgrades will be considered for full depth asphalt bases or for bases less than 8" thick upon recommendation from the Engineer of Record.
- c. Non-Stabilized subgrades meeting the above compaction requirements will be considered by the Engineering Division if the base course depth is increased by a thickness that yields an equivalent structural number. Such alternative designs are subject to review and approval by the Engineering Division.

1.5 Bases

1.5.1 Material

Limerock or crushed concrete bases shall be a minimum of eight inches (8") thick, compacted in a 6" maximum lift. Limerock shall have a minimum LBR of 100 and crushed concrete shall have a minimum LBR of 150. Limerock of the Miami formation shall be used, having a minimum percentage of carbonates of calcium and magnesium of 70, unless otherwise approved. Crushed concrete shall have a maximum size of 1". Full depth asphalt base will be considered upon recommendation from the Engineer of Record. No other base material is allowed.

1.5.2 Base Density Requirements

Base material shall be compacted to a density of not less than 98% of maximum dry density as determined by AASHTO T-180 under all paved areas.

1.6 Wearing (Surface) Courses

- a. Surface courses are to be a minimum of 2" thick asphaltic concrete construction in one or two lifts as determined by the Engineering Division.
- b. Bottom Course - 3/4" min. thick, Type S-III, or 1-1/2" min. thick Type S-I or SP-12.5
- c. Top Course - 3/4" min. thick, Type S-III, or 3/4" min. thick SP-9.5
- d. A tack coat shall be used between paving courses, and a prime coat shall be used on the finished rock base.
- e. Wearing courses shall not be placed until all underground utilities are installed and accepted, and, when requested, a finished Rock Survey has been submitted to the Engineering Division and accepted.

1.7 Curb/Gutter

- a. All curb elements shall have a foundation or "pad" with a minimum LBR of 100 and shall be at least 4" in thickness, extending 6" (min.) beyond the edges of the concrete, compacted to 98% of maximum density, per AASHTO T-180, unless otherwise approved by the Engineering Division.
- b. Whenever properties are developed or redeveloped, fifty percent (50%) or more, the existing condition or absence of the curb shall be brought into conformance with these Standards at that time. The type of curb shall be determined by the Engineering Division.

1.8 Swales

Bottom of swales, measured from top of turf, shall be at least four inches (4") below the edge of adjoining pavement. Swales shall be compacted to 95% of maximum density, per AASHTO T-180.

1.9 Drainage

- a. All drainage pipe installations in rights-of-way and easements shall be of reinforced concrete, conforming to ASTM specification C. The minimum size pipe to be used shall be 15" diameter. Ductile iron, HDPE, and PVC, 12" min. in size, may be substituted upon approval of the Engineering Division.
- b. Perforated corrugated aluminum or HDPE pipe may be substituted for slotted reinforced concrete pipe upon approval by the Engineering Division.
- c. All drainage pipe in the public right-of-way shall have a minimum of 18" of cover, unless otherwise approved by the Engineering Division.
- d. Drainage manholes shall be not less than four feet (4') inside dimension between opposing walls and shall meet the requirements of ASTM Standard C-478. Walls shall be not less than six inches (8") thick. Top and bottom slabs shall be not less than eight inches (8") thick.

1.10 Sidewalks

- a. Sidewalks shall be of Portland Cement Concrete, a minimum of 3,000 psi, four inches (4") thick, and five feet (5.0') wide. Sidewalks shall extend across driveways, at which locations they shall have a minimum thickness of 6". Additionally, any sidewalk that is directly adjacent to a vehicular travel or parking lane, shall be 6" thick.
- b. Any necessary obstruction shall be placed so as to maintain the maximum clear width and meet the requirements of the Americans with Disabilities Act. Sidewalks shall be maintained by the Town. The abutting properties shall maintain driveways, including the sidewalk sections.
- c. Sidewalks shall have a transverse slope no greater than 2% (1:50) down towards the swale or gutter and shall be given transverse hair broom finish. Special surface treatments such as pavers, tile, etc., and paint are not permitted.
- d. Ramps meeting the requirements of the Florida Accessibility Code shall be placed at all corners and crosswalks.
- e. Decorative driveway surfaces will be permitted in areas where sidewalks do not exist. A "driveway agreement" must be recorded in the

Official Records of Palm Beach County. A sample copy of a Driveway Agreement can be found on the Town of Palm Beach website at: <https://townofpalmbeach.com/423/Permits-and-Licenses>.

1.11 Grassing

Any grassed areas disturbed by construction or maintenance activities shall be sodded to equal or better condition than that which existed prior to the permitted activity.

1.12 Restoration

The entire work area utilized for the performance of any permitted work shall be restored to equal or better condition than that which existed prior to the permitted activity by the permittee.

1.13 "Record" Drawings & Certifications

- a. If required, "record" drawings of the finished rock base must be submitted to the Engineering Division for approval before proceeding with asphalt pavement. These drawings must be signed and sealed by a Land Surveyor registered in the State of Florida and must show finished rock base elevations and offsets at center line, edge of pavement, plus elevations of bottom of swale or flow line of gutter, top of curb and right-of-way line, at high and low points, intersections and breaks in grade. Elevations shall be verified and shown at intervals not to exceed 25 feet measured along the profile grade line.
- b. Compaction must be verified by an independent certified Engineering Testing Laboratory by making Field Density Tests of each layer of compacted material at prescribed intervals before the succeeding layer is placed. Test reports and rock "Record Drawings" must be submitted to the Engineering Division before paving operations begin.

1.14 Final Inspection and Acceptance

After construction is completed and all certifications, record drawings and other required documents have been submitted to the Engineering Division, and accepted, but before the one-year Bonded Maintenance period begins, the permittee shall request a final inspection of the project. The Engineering Division and all other interested parties shall jointly perform such inspection to determine the acceptability of the project for maintenance. Following the inspection, any noted defects will be corrected by the permittee, after which the Engineering Division will issue a notice of acceptance. Copies of

acceptance notices from other maintaining agencies may be required to be submitted to the Engineering Division. This will mark the start of the one-year warrantee period.

2. Pavement Marking/Signing

2.1 Pavement Markings

2.1.1 General

The design and construction of pavement marking systems shall be in accordance with the following standards:

- FDOT Standards
- Florida Green Book Standards
- Manual on Uniform Traffic Control Devices

2.1.2 Pavement Marking Plan

Pavement marking and signing plans shall be submitted to the Engineering Division for review and approval as part of the total paving and drainage package. These plans shall show all new markings including tie-ins to existing markings. Removals of existing markings shall be shown. Materials shall be specified. The location of raised reflective pavement markers shall be identified.

2.1.3 Permanent Pavement Markings

Permanent pavement markings shall consist of alkyd-based thermoplastic or inlaid preformed plastic material. All such materials shall be fully reflectorized.

2.1.4 Temporary Pavement Markings

- a. Temporary pavement markings may be used during intermediate phases of road construction or where overlayment or further construction of the road is to occur.
- b. Temporary markings shall consist of paint or traffic tape. All such markings shall be fully reflectorized.

2.1.5 Removal of Old Pavement Markings

Old pavement markings shall be covered by a pavement overlay prior to installing new markings. Old markings can be painted over with black paint as a temporary measure only.

2.1.6 Construction/Resurfacing

Pavement markings (either permanent or temporary) shall be installed on the project as soon as practicable following paving. In the event that a road is placed in service, the temporary or permanent pavement striping shall be applied by the end of each day's operation unless precluded by inclement weather, in which case it shall be striped during the next daylight period. Any road placed in service without striping shall have the traffic lanes delineated in accordance with the "Manual of Uniform Traffic Control Devices."

2.2 Signs

2.2.1 General

The design and construction of traffic signs shall be in accordance with the following standards:

- FDOT Standards
- Florida Green Book Standards
- Manual on Uniform Traffic Control Devices

2.2.2 Signing Plan

Signing and pavement marking plans shall be submitted to the Engineering Division for review and approval, as part of the total paving and drainage submittal. The plan shall show all new signs and all existing signs to remain shall be shown.

2.2.3 Materials

All "STOP," "YIELD," "DO NOT ENTER," and "WRONG WAY" signs and street name signs shall be fabricated entirely with High Intensity reflective sheeting. Other signs shall be fabricated using engineering grade materials. Post-mounted signs shall be mounted on single or double steel U-Channel posts. Tubular posts shall not be used unless specifically approved by the Engineering Division. Decorative sign posts may be required in certain areas of the Town as directed by the Engineering Division.

2.2.4 Maintenance of Signs During Construction

It shall be the contractor's responsibility to place and maintain all required temporary signing throughout the life of the project.

3. Driveways and Driveway Approaches

- 3.1 The Director of Public Works, or his/her designee, shall review and approve the location of driveways for all properties within the Town of Palm Beach. The siting of these driveways shall conform to the following conditions or criteria:
 - a. Corner Lots - For corner lot properties where there is new construction or that are being substantially renovated and which adjoin a major roadway, driveway shall be located on the minor roadway beginning at a minimum distance of thirty feet (30') from the major street curb line or edge of pavement, whichever is greater. Required driveway locations per this section may be appealed pursuant to written request to the Director of Public Works.
 - b. Renovations - In instances where an existing property is being renovated and the footprint of the structure and garage remains the same, driveways leading to the major thoroughfare rather than the side street may be maintained. However, sight visibility criteria must be reviewed and that sight visibility to the maximum extent possible be established. This may require relocation or elimination of existing walls, fences, trees and/or hedges.
- 3.2 Major Roadways – Major Roadways are defined as: Bradley Place, Cocanut Row north of Royal Palm Way, North County Road, North Lake Way south of Mediterranean Road, North Ocean Boulevard, Slope Trail, South County Road, and South Ocean Boulevard.
- 3.3 Driveway Corner Clips – Minor Streets - All driveways connecting to minor streets shall have minimum driveway corner clips established measuring eight (8) feet by fifteen (15) feet on each side of the driveway. The eight foot (8') dimension shall be measured perpendicular to the edge of the roadway and the fifteen foot (15') dimension shall be measured along the roadway from the outside edge of driveway. No obstructions to vision greater than thirty inches (30") or landscaping with a mature height greater than thirty inches (30") are allowed within driveway corner clip.
- 3.4 Sidewalk Corner Clips - All driveways that cross a pedestrian sidewalk or pathway shall have minimum sidewalk corner clips established measuring

five (5) feet by five (5) feet on each side of the driveway. One of the five foot (5') dimensions shall be measured perpendicular to the edge of the sidewalk along the outside edge of the driveway and the other five foot (5') dimension shall be measured perpendicular to the edge of the driveway along the backside of the sidewalk. No obstructions to vision greater than thirty inches (30") or landscaping with a mature height greater than thirty inches (30") are allowed within sidewalk corner clip.

- 3.5 Driveway Sight Visibility Triangles – Major Streets - All driveways connecting to major streets shall have minimum sight visibility triangles as shown in the Standard Details. No obstructions or landscaping shall be allowed to block visibility, as shown in Standard Details. When deemed necessary, the Director of Public Works or his designee may require that an engineering analysis be conducted to determine the proper sight visibility triangle or to establish other criteria on a site-specific basis. This includes parcels which are located mid-block on major streets or renovations as described above. F.D.O.T Design Manual may also be used to determine driveway sight triangle dimensions. Sight triangle dimensions may also be determined based on the AASHTO Publication, A Policy on Geometric Design of Highways and Streets. Applicants are required to use the most stringent vehicle that can reasonably be expected to use the driveway.
- 3.6 Plans Required - A plan showing measurements indicating the width of driveway and/or approach(es) and the distance from edge of driveway/approach(es) to property line and a structural drawing of any portion of work done in the rights-of-way must be submitted with the application for a rights-of-way permit. All driveways shall be a minimum distance of six feet (6') from the property line.
- 3.7 Separation Joint - A separation between that part of the driveway located on private property and that portion of driveway lying within the limits of the right-of-way shall be installed as required by the Town Engineer. This separation may be made with an expansion joint or other material as may be specified and approved by the Town Engineer.
- 3.8 Curbs Required - Driveways that abut roads without curbs shall, prior to installation of driveway, install a header curb or drop vertical curb across the front of the entire driveway. In addition, driveways of loose gravel shall install, at a minimum, a two foot (2') wide by six inch (6") thick concrete gravel stop across the entire front of the driveway.
- 3.9 Driveway Drainage Considerations – Driveways shall be graded or provided with drainage features that allow on-site detention requirements specified in the Town's Code of Ordinances to be met.

- 3.10 Driveway Agreement - If any driveway approach located within the right-of-way is other than plain asphalt or concrete, the property owner must submit a recorded Driveway Agreement before a permit for the work will be issued. A Driveway Agreement is an agreement by a property owner to restore their driveway which lies within a road right-of-way or easement, if said driveway is excavated for public utility or other municipal purposes. The agreement is required to be recorded by the property owner in the Palm Beach County Official Records.
- 3.11 Inspections, form work, and other preparation for construction of driveways and approaches within the right-of-way will be inspected by a Public Works Inspector before installation of asphalt or concrete. A 24-hour notice is required for all Public Works inspections. Public Works Inspectors do not inspect driveways on private property.
- 3.12 The Director of Public Works, or his/her designee, may accept a driveway citing that, in their professional engineering opinion, is safe and poses no danger to the public. As a prerequisite to any Town approval, an owner will now be required to conduct an engineering analysis in the event that the current conditions and criteria are requested to be reconsidered and/or reduced.

4. Driveways, Abandoned

As a condition for construction on a property, all abandoned driveways shall be removed with the curb, driveway and asphalt pavement restored at the owner's expense.

CHAPTER 7: WATER DISTRIBUTION AND SEWAGE COLLECTION SYSTEMS - GENERAL REQUIREMENTS

1. Permits

- 1.1. Permits for construction or maintenance of water distribution and sewage collection systems or the additions thereto, shall be granted only after the following requirements have been completed:
- a. A subdivision plat, easements or rights-of-way for the area of the proposed construction has been recorded in the Palm Beach County Official Records. This requirement shall not apply to the installation of lines in or through areas already platted or within dedicated rights-of-way, or within easements or rights-of-way extending across undeveloped areas.
 - b. Water and sewer plans must be submitted to the Engineering Division for review and approval with paving and drainage plans, on projects that require such work. Utility plans for new services or modifications/improvements/adjustments to existing utilities shall also be reviewed and approved by the applicable utility owner. Such additional reviews shall be coordinated by the Engineer of Record. Copies of utility plans approved by the applicable owner may be required to be submitted to the Engineering Division.
 - c. Project plans, if any, and technical specifications shall be approved by the Engineering Division.

2. Permit Fees and Bonds

- 2.1 The separate bond amounts and fees are to be computed in accordance with the provisions of Chapter 3 of these "Standards."
- 2.2 Re-Inspection and Re-Testing Fees
- a. A re-inspection and/or re-testing fee will be charged each time an inspector of the Engineering Division or Water Resources Division must visit any jobsite to re-inspect or re-test any installation or portion thereof that has failed to meet Town requirements on a previous test or scheduled inspection.

- b. Notice of cancellation of any test(s) or scheduled inspection(s) must be given at least four (4) working hours, prior to the scheduled time. Failure to do so will result in the test or inspection being counted as a failure, and a re-test or re-inspection fee being charged upon re-scheduling of same.
- c. The re-inspection fee shall be as described in the Master Fee Schedule.
- d. The re-testing fee shall be as described in the Master Fee Schedule for each re-test on any item.

3. Plans and Specifications

- 3.1 Electronically submit plans signed and sealed by a Professional Engineer licensed in the State of Florida to the Engineering Division for review and approval via the permitting portal.
- 3.2 Accessible Benchmarks shall be listed on all plans, using NAVD.
- 3.3 All plans shall be submitted electronically white backgrounds and black lines. Color renderings and photography provided on the plans is also acceptable. In addition to the proposed project, plans shall show all existing facilities as well as all other planned facilities sufficiently to permit assessment of the compatibility of the proposed work with the existing systems.
- 3.4 Plans must be submitted electronically, formatted for 24x36 or 11x17 sheet sizes, provided that scale requirements are met. Exhibits may be provided in 8.5x11 or 8.5x14 sheet sizes.
- 3.5 Any general area layout shall be prepared at a scale of 100 feet or less to the inch. Detailed plans shall be prepared at a scale of 40 feet or less to the inch. Design drawings shall include both plans and profiles where the facility being installed is not replacing an existing utility of the same size and location, or if there are other facilities in the area and a profile is warranted to detail potential conflicts. When profiles are drawn, they shall be to the same horizontal scale as the plan.
- 3.6 Dimensions of right-of-way and easement widths shall be indicated.
- 3.7 All plans show suitable legends.
- 3.8 The detailed plans shall show water and/or sewer main materials, sizes, and their dimensioned locations. They shall also show the locations of valves, hydrants, manholes, tees, wyes and approximate locations of house

connections. Each building/property shall have its own sewer lateral. As-builts shall station each house service sewer lateral.

- 3.9 Existing pavements shall be indicated and dimensioned with elevations provided. Proposed cuts in pavement shall be shown and noted.
- 3.10 When locations of existing utilities cannot be determined, this shall be so noted.
- 3.11 Service laterals which are to be installed during the original installation of main(s) shall be indicated, but need not have dimensioned locations on original plans. Plans for services to be installed as a separate project, after installation of main(s), shall be noted and explained.
- 3.12 All street names, street addresses, lot numbers and block numbers shall be shown.
- 3.13 Specifications for the proposed work shall be submitted with the plans.

4. Water and Sewer System Standards

- 4.1. Water and Sewer plans and designs must meet the requirements of the following standards, as applicable and except as modified by these Standards:
 - Town Standards
 - City of West Palm Beach Utilities Department Standards
 - American Water Works Association (AWWA)
 - Recommended Standards for Water Works and Wastewater Facilities (10 State Standards)
 - National Sanitation Foundation (NSF)
 - Florida Department of Environmental Protection (FDEP)
 - Palm Beach County Health Department (PBCHD)
 - US Environmental Protection Agency (EPA)
 - FDOT Utility Accommodation Manual
 - American National Standards Institute (ANSI)
 - American Society for Testing Materials (ASTM)

5. Water and Sewer Materials

- 5.1. Materials specified within the design of Water and Sewer systems shall be clearly stated on the Plans and Specifications.

- 5.2. Water and Sewer materials shall meet the requirements provided in these Standards. In the absence of a specific material or product requirement listed in these Standards, the standards described in Section 4 above, as applicable, shall apply.

6. Sanitary Sewer Service Laterals

It is the property owner's responsibility to maintain any service lateral or privately owned force main up to and including the connection to the Town's gravity or force main line, which is or may be, located in the right-of-way or easement. If at any time the sewer lateral (including during new construction or substantial remodel) is found to be defective (i.e. connected to the storm sewer system, incorrect main connection, cracked, or otherwise in poor condition), the owner/developer will be required to bring sewer lateral up to code immediately. Old clay lines or metal laterals must be replaced with PVC up to the main. All abandoned laterals to a property shall be removed.

7. Installation

- 7.1. The applicable provisions of Chapters 3 and 4 of these "Standards" shall govern the work in the right-of-way.

- 7.2. Backflow Prevention Devices

- a. All backflow prevention devices required for the potable water system and fire protection are to be located on private property and out of all rights-of-way and easements.

- 7.3. Sewer Cap-off

- a. A Water Resources Division inspection is required for all sewer cap-offs. Forty-eight (48) hour notification is required to schedule a sewer cap-off inspection. Notification is to be made to the Water Resources Division at 838-5440 to schedule the inspection appointment.
- b. Both a drawing referencing the location of the sewer lateral (tied into a property corner and another permanent reference point) must be submitted and a physical inspection of the cap-off by the Water Resources Division are required prior to receiving a sign-off. Water Resources Division may elect to televise the lateral and connection to the sewer main. If a protruding main connection or broken lateral is detected, a sign-off will not occur until the problem is corrected.

CHAPTER 8: WATER DISTRIBUTION SYSTEM - TECHNICAL REQUIREMENTS

1. Jurisdiction

The City of West Palm Beach currently holds a franchise agreement from the Town to supply potable water. All water distribution technical requirements must meet the City of West Palm Beach Utilities Department standards. The City's Engineering Division may be contacted at (561) 494-1040.

2. Permits Required

Alterations and improvements to the water distribution system require City of West Palm Beach Engineering and Utilities review and approval prior to commencement of construction. A Town of Palm Beach right of way permit is required for all water distribution related work in rights of way and easements. See Chapter 3, Permits, Fees and Bonds for more information.

3. Installation

3.1 The applicable provisions of Chapters 3 and 4 of these "Standards" shall govern the work in the right-of- way.

3.2 The placement of backflow prevention devices within the Town's road rights-of-way is prohibited. Backflow prevention devices are to be set back a sufficient distance from the road right-of-way to allow for sight screening from the roadway, but still remain close enough to the water meter to meet the City of West Palm Beach requirements.

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CHAPTER 9: SEWAGE COLLECTION SYSTEMS - TECHNICAL REQUIREMENTS

1. Standards

All sewage collections systems in the public rights-of-way and easements shall be in accordance with the Standards described in Chapter 7, except as modified by these Standards. All installations also shall be in accordance with the manufacturer's recommendations.

2. Materials

2.1 Pipe

Gravity sewers and house connections shall be constructed of PVC or ductile iron pipe.

- a. All ductile iron pipe and fittings conveying or transmitting raw sewage shall be designed for a minimum working pressure of 150 psi and have all surfaces in contact with wastewater coated with a coating suitable for wastewater service.
- b. Ductile iron pipe shall conform with current ANSI/AWWA standards. Minimum wall thickness shall be class 50.
- c. PVC non-pressure pipe shall conform to the requirements of the applicable ASTM standard, wall thickness class SDR-26 minimum.

2.2 Joints

- a. Joints for ductile iron pipe shall be bell and spigot type.
- b. Joints for PVC non-pressure pipe shall be of the bell and spigot, push-on, rubber gasket type only. No solvent weld or threaded joints will be permitted.

2.3 Manholes

Precast reinforced concrete manholes shall conform to the requirements of ASTM C478 and the following modifications thereto:

- a. Minimum wall thickness shall be eight inches (8").

- b. Minimum inside diameter of base sections shall be three and one-half feet (3.5').
- c. The precast base shall be a minimum of eight inches (8") thick and be cast monolithically with the bottom section of the manhole wall. The base slab shall extend a minimum of four inches (4") from the outside wall of the manhole.
- d. The minimum height of base sections shall be three feet (3') from the bottom of base slab, except that under special conditions, the height may be decreased to 18", contingent upon prior approval of the Engineering Division.
- e. Manhole sections shall be joined with a mastic compound or a round compression ring of neoprene material set in annular spaces cast into the spigot end of a bell and spigot type joint. The mastic compound or ring shall be uniformly compressed between the positioned sections so as to form a water-tight joint. After the sections are assembled, the remaining space in the joint shall be pointed up and filled with dense cement mortar and finished so as to make a smooth, continuous surface inside and outside the wall sections.
- f. Precast manholes shall terminate at such elevations as will permit laying up a minimum of two (2) courses and maximum of five (5) courses of clay brick under the manhole frame to make allowance for future street grade adjustment.
- g. Brick for manhole construction shall be dense, hard-burned, clay brick conforming to ASTM Specification C-62.
- h. Precast concrete collar extensions may be used if more than five (5) courses of brick are required to set the manhole rim to the specified grade elevation. Collar extensions shall not exceed 12" in height. Collar extensions shall be 3" min. thick, be constructed of 4,000 psi min. concrete, and have reinforcement that meets ASTM A-615, A-185 Specifications.
- i. Drop connections will be required when the vertical distance between pipe inverts exceeds two (2) feet. Inside drop connections are preferred but outside drop connections will be allowed. Drop connection bases, where required, shall be cast monolithically with the manhole base. Drop encasement shall be fully dowelled to the manhole base and walls.

- j. Two coats (a minimum thickness of protective material, Kopper's 300M or equal) shall be applied to the entire outside and inside surface of the manhole at the jobsite, after inspection. This material shall be applied in accordance with the manufacturer's specifications. The coats shall be contrasting colors so as to be easily verified. The outside of the manhole shall be coated prior to being placed in the ground, and the inside shall be coated after final inspection.
- k. Influent and effluent sewer lines shall be grouted in place using a waterproof, non-shrinking grout, acceptable to the Engineering Division. All openings and joints shall be sealed watertight. Special watertight seals shall be considered for specific installations as approved by the Engineering Division.
- l. The lid and frame shall be US Foundry 420A, or approved equivalent, unless otherwise approved by the Engineering Division.
- m. All concrete and mortar used in manhole construction shall have Type II cement (A.C.I.).
- n. All precast manhole sections, as delivered to the jobsite, shall be unpatched and shall bear the stamp of a certified Engineering Testing Laboratory, signed and dated, certifying that the manhole sections meet the requirements of ASTM Standard C478, and of this document for concrete strength, steel reinforcement area and placement, and appearance when manufactured. All manhole sections will be subject to inspection at the jobsite by the Public Works Inspector to verify conformity with requirements of ASTM-C478 and of this document.
- o. Approved manhole adaptor couplings shall be required when using PVC pipe.

2.4 Fittings

- a. All ductile iron fittings shall meet the requirements of ANSI/AWWA Standard C110, C111 and/or C153.
- b. PVC fittings shall be of monolithic or factory fabricated (solvent weld) construction in accordance with ASTM D-3034 and the type specified by the manufacturer of the pipe being used. No non-factory solvent welds or threaded joints will be permitted.

2.5. Service Laterals

- a. All service laterals shall be installed to the property line.
- b. Service laterals requiring cuts into pavement after installation of the main and paving of the roadway, will require separate permit fees and bonds and shall be avoided, if possible.
- c. Service laterals may not be stubbed into manholes except at terminal manholes and where approved by the Engineering Division. The invert of the lateral at the manhole shall meet a shaped concrete invert that will conduct the effluent without turbulence to the invert at the outflow of the manhole.

2.6. Service Connections

Each lot, tract, residence or business shall have an individual house connection. Each service lateral shall include a clean-out section having a clean-out plug. The minimum size pipe between the main line and the wye shall be six inches (6"), and the clean-outs shall be located as near to the right-of-way line as is practical for each residence or business connection.

2.7. Location

Gravity sewer lines shall be installed at the center of the right-of-way, unless otherwise approved by the Engineering Division. The separation, encasement and other factors concerning the placing of water and sanitary sewer facilities in the same right-of-way, shall be addressed in accordance with the applicable standards of all agencies having jurisdiction.

2.8. Cover

The minimum cover on all sanitary sewer mains and services shall be 30" for ductile iron and 36" for PVC materials. The slope of sanitary house connections shall be considered in determining sewer main cover.

2.9. Construction Procedures and Installation of Facilities

All construction procedures, sewer installations, restorations and pipe detection aids shall be in accordance with the provisions of Chapter 4 of this document.

2.10. Testing of Facilities

The Engineering Division and the Engineer of Record shall both be represented at all tests of sewer lines in the public rights-of-way. The Engineer of Record must certify all test results to the Town. The Engineering Division representative shall indicate concurrence with the test results by countersigning the test report at the conclusion of the test. In the event that the Engineering Division shall fail to witness such a properly scheduled event, the certification of the Engineer of Record shall be accepted.

a. Mandrel Testing of Lines

At the discretion of the Town Engineer, the contractor may be required to test designated lines for excessive deflection. The deflection gauge is sized to pass through a pipe with no more than 7.5% reduction in diameter due to manufacturing and installation imperfections. Any line through which the gauge will not pass will not be accepted until the line is corrected sufficiently to allow the test gauge to pass.

b. Visual & Television Inspection

On completion of each block or section of sewer, or at such other times as the Engineer of Record may direct, the block or section of sewer is to be cleaned, tested and inspected. Each section of the sewer is to show, on examination from either end, a full circle of light between manholes when lamped. The portion of the system being inspected shall be watertight, neatly constructed, with the manhole tops set permanently to exact position and grade. All defects disclosed by the inspection are to be corrected. Broken or cracked pipes are to be replaced, all deposits removed, and the sewers left true to line and grade, entirely clean and ready for use. After all other testing has been successfully completed, a video inspection may be required by the Engineering Division. Any defect disclosed during this inspection must be corrected by the Contractor, at their expense, before the lines can be accepted by the Engineering Division.

3. Certification and Record Drawings

- 3.1 The Engineer of Record on each project shall be responsible for observation of construction and shall inspect same for conformity to the approved plans and specifications. Upon completion of the project, the Engineer of Record shall furnish the required project documents to the Engineering Division, the Palm Beach County Public Health Unit and to any other agencies so requiring,

certifying that construction of the project had been carried out in substantial conformance to the approved plans and specifications.

- 3.2 Prior to final inspection, the Engineer of Record shall furnish one set of certified Record drawings to the Engineering Division at no charge.
- 3.3 Accurate house connection dimensions shall be shown on the plans. Main and terminal point locations, elevations of stubs or laterals, and locations and elevations of all changes in direction and slope shall also be shown. All manhole rim elevations, invert elevations and structure numbers must be shown on the record drawings.
- 3.4 In addition to the above requirements, record drawings shall indicate the size, material location and elevation of all underground utilities encountered during construction.
- 3.5 All locative information and dimensions shall be certified by a land surveyor registered in the State of Florida
- 3.6 The drawings submitted under the preceding paragraphs must be accompanied by a certification from the Engineer of Record that the installation conforms substantially to the design, has passed all required tests, and that the inspection of the installation during construction was conducted under the supervision of the Engineer of Record or their representative. All required reports and certifications must be received by the Engineering Division prior to final inspection.

4. Service Connections

Service connections shall not be made until the entire downstream system has been tested and accepted by the Engineering Division, the Palm Beach County Health Unit, and all other agencies having jurisdiction.

5. Abandoned Facilities

The provisions of Chapter 4 of these Standards shall apply.

6. Conflict Manholes

Conflict manholes involving sanitary sewers are to be avoided, if possible. Under extreme conditions, with the written permission of the Engineering Division and the approval of all other bodies having jurisdiction, they may be used but must conform to the requirements of Section 2.3 of this Chapter and to the detail in the Appendix.

CHAPTER 10: LANDSCAPING

1. General

With the exception of grass and low ground cover (i.e., those plants that left unmaintained will not exceed 30" in height), landscaping within the right-of-way and easements is prohibited. Exceptions to this prohibition must first obtain approval from the Engineering Division.

2. Permits

Permits for installation and/or modification of landscaping within rights of way and easements are required and may be issued by the Engineering Division if the following conditions are met:

- a. Landscaping and Irrigation plans must have been reviewed and be deemed approvable prior to submittal of an application for permit. Review and approval of Landscape and Irrigation plans during the ARCOM and/or Landmarks Preservation Commission approval process does not constitute a right of way and/or easement permit approval. A right of way and/or easement permit application must be submitted subsequent to the ARCOM and/or Landmarks Preservation Commission approval, as applicable.
- b. The provisions of Chapter 3 of this document.

3. Permit Fees and Bonds

Permit fees and bonds, as applicable, will be charged in accordance with the provisions contained in these Standards. See Chapter 3, Permits, Fees and Bonds for more information.

4. Plans and Specifications

- 4.1. All plans shall be submitted electronically white backgrounds and black lines. Color renderings and photography provided on the plans is also acceptable. In addition to the proposed project, plans shall show all existing facilities as well as all other planned facilities sufficiently to permit assessment of the compatibility of the proposed work with the existing systems. Underground utilities in the area of planting shall be shown.
- 4.2. Plans must be submitted electronically via the permitting portal, formatted for 24x36 or 11x17 sheet sizes, provided that scale requirements are met. Exhibits may be provided in 8.5x11 or 8.5x14 sheet sizes.

- 4.3. Any general area layout shall be prepared at a scale of 100 feet or less to the inch. Detailed plans shall be prepared at a scale of 40 feet or less to the inch.
- 4.4. Dimensions of right-of-way and easement widths shall be indicated.
- 4.5. All plans shall show suitable legends.
- 4.6. Proposed landscaping and irrigation improvements shall clearly be shown. Species, sizes and quantities shall be identified. Proposed tree staking and bracing details shall be provided on the plans.
- 4.7. Areas of soil replacement and/or conditioning and amendments shall be identified including depths.
- 4.8. Tree protection details shall be provided as may be applicable.
- 4.9. Other requirements as described in the Town's Code of Ordinances, Section 66-262.

5. Standards

All landscaping within the right-of-way shall be in accordance with the following standards:

- Town Standards
- Town's Code of Ordinances, Chapter 66, Article IV
- FDOT Standards
- Florida Green Book

6. Materials

All plant material shall be Florida Grade No. 1 or better at time of planting, as set forth in the Florida Department of Agriculture's "Florida Grades and Standards for Nursery Plants," latest edition.

7. Installation

- 7.1. Landscaping shall be planted in such a manner as to not restrict sight distance or drainage flow.
 - a. A minimum 3-foot separation between walls greater than 4-feet in height and the limits of the sight triangle shall be provided. Greater separation distances may be required by the Engineering Division for

plant species that are large, or may reasonably be expected to grow large, that are planted along the wall adjacent to the sight triangle. Safe sight triangles as described in the standard details shall be applied to driveways and intersections. Additional requirements may be required by the Engineering Division depending on the specific circumstances that exist.

- b. Tree foliage shall be maintained at a height greater than 9-feet above the edge of pavement. Ground cover within clear sight triangle areas shall be maintained at a height of 2'-6" or less above the edge of pavement.
 - c. Tree spacing within a clear sight triangle shall be in accordance with the requirements specified in the FDOT Design Manual, latest edition.
 - d. Tree limbs within 2-foot of the edge of pavement or extend into the roadway shall be maintained at a clearance of no less than 14.5-feet. Exceptions to this requirement may be provided for Historic or Specimen trees as defined by the Town's Code of Ordinances and approved by the Town.
- 7.2. An Installation and Maintenance Agreement shall be required for landscape materials within and adjacent to the roadway.
- 7.3. Landscaping shall not be placed in such a manner as to cause damage to underground utilities at the time of installation or in the future as reasonably determined by the Engineering Division. Root barriers may be required by the Engineering Division as a measure to protect existing utilities.
- 7.4. The applicable provisions of Chapters 3 and 4 of these "Standards" shall govern the work in the right-of- way.

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CHAPTER 11: LANDSCAPE IRRIGATION - TECHNICAL REQUIREMENTS

1. General

Coordination with the Engineering Division in advance of permit application submittal is required for any irrigation improvements and/or modifications within the right of way or easements that will ultimately be operated and maintained by the Public Works Department.

2. Permits

Permits for installation and/or modification of irrigation systems within rights of way and easements are required and may be issued by the Engineering Division if the following conditions are met:

- a. Irrigation plans must have been reviewed and be deemed approvable prior to submittal of an application for permit. Review and approval of landscape and irrigation plans during the ARCOM and/or Landmarks Preservation Commission approval process does not constitute a right of way and/or easement permit approval. A right of way and/or easement permit application must be submitted subsequent to the ARCOM and/or Landmarks Preservation Commission approval, as applicable.
- b. The provisions of Chapter 3 of this document.

3. Permit Fees and Bonds

Permit fees and bonds, as applicable, will be charged in accordance with the provisions contained in these Standards. See Chapter 3, Permits, Fees and Bonds for more information.

4. Plans and Specifications

4.1 All plans shall be submitted electronically white backgrounds and black lines. Color renderings and photography provided on the plans is also acceptable. In addition to the proposed project, plans shall show all existing facilities as well as all other planned facilities sufficiently to permit assessment of the compatibility of the proposed work with the existing systems. Underground utilities in the area of irrigation improvements shall be shown.

4.2 Plans must be submitted electronically, formatted for 24x36 or 11x17 sheet sizes, provided that scale requirements are met. Exhibits may be provided in 8.5x11 or 8.5x14 sheet sizes.

- 4.3 Any general area layout shall be prepared at a scale of 100 feet or less to the inch. Detailed plans shall be prepared at a scale of 40 feet or less to the inch. Design drawings shall include both plans and profiles where the facility being installed is not replacing an existing facility of the same size and location, or if there are other facilities in the area and a profile is warranted to detail potential conflicts. When profiles are drawn, they shall be to the same horizontal scale as the plan.
- 4.4 Dimensions of right-of-way and easement widths shall be indicated.
- 4.5 All plans shall show suitable legends.
- 4.6 Proposed irrigation improvements shall clearly be shown. Water sources, backflow prevention, controllers, main lines, branches, heads, control valves, etc., to the extent they are located in the right of way or easements, shall be shown on the plans. Installation details, material specifications, cover depths, etc. shall also be shown on the plans.
- 4.7 Other requirements as described in the Town's Code of Ordinances, Section 66-263.

5. Standards

All landscape irrigation systems constructed in the right-of-way shall be in accordance with the following standards:

- American Water Works Association (AWWA) Standards for Pressure Pipes
- American Society for Testing Materials (ASTM)
- Landscape Irrigation and Florida Friendly Landscaping Design Standards
- Town's Code of Ordinances, Chapter 66, Article IV

All irrigation systems shall be constructed to minimize water usage and to promote conservation whenever possible.

6. Materials

- 6.1. Irrigation pipe and fittings 4" in diameter and larger shall be PVC or HDPE. PVC shall conform to AWWA C-900 with a minimum wall thickness of DR 18. Solvent-weld joints are not permitted in these sizes of PVC. HDPE pipe and fittings shall conform to AWWA C901/C906 with a minimum wall thickness of DR 11. The Engineer of Record shall evaluate and select a greater wall thickness for HDPE if the proposed installation methods require such.
- 6.2. Irrigation pipe and fittings less than 4" in diameter shall be of PVC conforming to ASTM D1785, Schedule 40 min. or HDPE conforming to ASTM F714 with a minimum wall thickness of DR 11. The Engineer of Record shall evaluate and select a greater wall thickness for HDPE if the proposed installation methods require such.

7. Installation

- 7.1. Irrigation pipes under paved areas shall be carried in PVC or HDPE and shall have a minimum of 36" cover.
- 7.2. All mains and headers in unpaved areas shall have a minimum of 30" cover. Branches shall have a minimum of 12" cover.
- 7.3. Solvent-weld joints are not permitted for pipe sizes 4" in diameter and larger.
- 7.4. All electrically operated valves shall be 24-volt (or less) actuated.
- 7.5. No rock or other objectionable material shall be in contact with or within 6" of any irrigation pipe.
- 7.6. The applicable provisions of Chapters 3 and 4 of these "Standards" shall govern the work in the right-of- way.

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CHAPTER 12: SPECIAL PROVISIONS

In addition to the standards previously outlined, there are numerous "special conditions" required of construction and maintenance operations taking place within the Town. Described below are special conditions normally required of permitted operations. Due to site specifics, the actual permit conditions may vary.

1. Construction Access/Temporary Driveways

During construction of a new residential or commercial improvement, the general contractor shall designate access points to the property. Temporary driveways shall be constructed of concrete or asphalt and maintained throughout the project so that there will be no tripping hazard to pedestrians. Vehicle traversing of any unprotected area of curbing, median or sidewalk, is prohibited. The intent of this section is to minimize damage to the existing sidewalks and curbs. It shall be the contractor's responsibility to restore all sidewalks, curbs and driveways to Town standards prior to the property receiving its Certificate of Occupancy.

2. Construction Parking & Construction Site Management

Construction parking on public streets and construction site management shall be controlled in order to protect the public's health and welfare. The rules and procedures outlined below are commonly referred to as the Town's "3-Strike Rule".

All vehicles and equipment belonging to personnel working on or visiting a construction site from the date of the issuance of a building permit, to the date of the issuance of the certificate of occupancy, shall be parked on the construction site at all times. If the site cannot accommodate such vehicles and equipment, then the contractor may initiate car and/or truck pooling, apply for up to, but not more than, three (3) right-of-way permits (two (2) in the C-WA District) for parking construction vehicles and/or equipment on the street in front of the construction site, or utilize both options in order prevent unnecessary congestion adjacent to the construction site. A site plan may be required to illustrate that the site is being fully and efficiently used for construction material storage and parking. In addition, one permit can be provided to the owner of the property to perform an occasional site visit. Associated fees are listed in the Master Fee Schedule.

The following rules and procedures shall govern the 3-Strike Rule:

- a. Owner/contractor may apply for up to, but not more than, three (3) right-of-way permits (two (2) in the C-WA District) for the temporary parking of

construction-related vehicles. In addition, one (1) permit can be provided to the owner of the property to perform an occasional site visit.

- b. Contractor will be asked if right-of-way parking permits are anticipated at time of initial building permit application. If anticipated at that time, or any subsequent time, a parking plan must be provided on an application form as prescribed by the Town, at a legible scale, as determined by the Town which clearly illustrates the entire construction site.
- c. Applications must include a notarized signature from the property owner acknowledging understanding of the 3-strike rule in its entirety. A notarized power of attorney signature will be accepted by the Town, provided it specifies that the owner has been personally informed of the entire 3-strike rule.
- d. The Engineering Division will review all such applications upon payment of the application fee(s) listed in the Master Fee Schedule. The Engineering Division shall determine whether or not to approve the application(s). Furthermore the Engineering Division will review Construction Parking Permits and determine, if approved, whether 1, 2, or 3 parking placards are issued.
- e. The contractor must apply for a permit(s) from the Engineering Division within seventy-two (72) hours in advance of the short-term use of the public right-of-way. Only extreme extenuating circumstances will be considered for exceptions to this advance notice requirement.
- f. As a condition of approval, contractor may be required to provide the Town with tag numbers of all vehicles authorized by the contractor to work at the site and is responsible for updating for any reason that may cause a change in the tag number list for a job site. The Director of Public Works or the Director's designees, which may include code enforcement officers, parking enforcement officers, fire marshal, and police officers, are authorized to enforce all "3-strike rule" provisions and to issue citations for violations of these provisions. Parking permit must be displayed on the dashboard of the vehicle. Failure to comply will result in a strike.
- g. Owner/contractor must designate a private employee to act as a traffic monitor at each site to enforce Town rules when on-street construction parking or right of way permits have been allowed. The traffic monitor must be present whenever work occurs. Failure to do so constitutes a strike.
- h. If the Town finds that there is no dedicated traffic monitor at a construction site, all right-of-way permits shall be immediately revoked and one (1) strike will be assessed.

- i. When car or truck pooling is utilized, no substitute on-street parking spaces in the Town can be utilized for said purpose. Failure to comply will result in a strike.
- j. C-WA District right-of-way permits shall be limited to two (2) vehicles for purposes of loading or unloading and for essential construction activities. Parking of construction vehicles that are not actively involved in the loading and unloading process will not be permitted. Failure to comply will result in a strike.
- k. Only original Town-issued permits are valid, no copies are allowed. Permits may be transferred between vehicles but are valid only for the construction site for which they are issued. Failure to comply will result in a strike.
- l. Copying, forging or duplication of a right-of-way permit is prohibited. All right-of-way permits will be immediately revoked if the Town determines that duplication or abuse has occurred.
- m. Additional permits may be issued for the three (3) week period prior to the estimated date of issuance of the certificate of occupancy in the event said vehicles cannot be accommodated on site. The number of permits granted shall be determined by the Director of Public Works, or their designee.
- n. Property owners and their contractors shall be responsible for the implementation, installation, and maintenance of all required demolition and construction screening, perimeter landscaping, screening of on-job toilet facilities, following the truck logistics and staging plan, and any and all site conditions required by the Town's Code of Ordinances, Chapter 18, Buildings and Building Regulations, including Sections 18-2 (Landscaping; maintenance where used for screening), 18-3 (On-job toilet facilities, required), 18-86 (Construction staging and truck logistics plan), 18-111 (Compliance with the Town's right of way manual), and 18-201 (Construction screening). Any Town-documented lack of the required item(s) or lack of maintenance of the item(s) will constitute one (1) strike, and the Town will concurrently prosecute the violation(s) through the Code Enforcement process.
- o. Property owners and their contractors shall be responsible for compliance with the noise regulations and the hours for construction work, found in the Town's Code of Ordinances, Chapter 42, Environment, Sections 42-197 through 42-199. Any Town-documented violation of these sections will constitute one (1) strike, and the Town will concurrently prosecute the violation(s) through the Code Enforcement process.

- p. Property owners and their contractors shall be responsible for compliance with the Florida Building Code and these Right-of-Way Standards, as per the Town's Code of Ordinances, Chapter 18. Any Town-documented violation of these sections will constitute one (1) strike.
- q. Failure to comply with the aforementioned conditions may result in the suspension, fines, or in the case of repeat offenses, the cancellation of the violator's building permit.
- r. Penalties for parking in the right-of-way in violation of this section shall be as described in the Master Fee Schedule.
- s. Said penalty may be appealed in writing within seven (7) calendar days of the date of issuance to either the Chief of Police, the Director of Public Works, or the Fire Marshall (dependent upon the Department issuing the ticket), who shall, thereafter, act on said appeal. If the appeal is upheld, then the 1st, 2nd, or 3rd strike, as applicable, shall be removed from the record. Construction may continue until the appeal has been acted upon.
- t. If there is another strike received by the contractor on the same job site that results in a total of 3 strikes at a given job site, the Chief of Police, the Director of Public Works, or the Fire Marshall (dependent upon the Department issuing the ticket) will notify the Director of Planning, Zoning, & Building of the situation upon passage of the time allowed for appeal.
- u. When a 3rd strike has been issued, and if an appeal is denied or is not filed in timely fashion, the Planning, Zoning & Building Department shall issue a Stop Work Order halting all continued activity at the site as allowed in Section 18-204 of the Town's Code of Ordinances.
- v. After issuing the stop work order, the Director of Planning, Zoning, & Building must forward the matter to the Town Council at their next available meeting should the contractor and/or the property owner request in writing that the Town Council give consideration to lifting the stop work order.
- w. All requests to lift the stop work order must be decided by the Town Council, upon written application to the Planning, Zoning & Building Department, no less than seven (7) days prior to a regularly scheduled monthly Town Council (Development Review) meeting.
- x. The Town Council shall have the power to admonish the contractor; take such action as deemed necessary to effect the stop work order on a permanent basis by nullifying the existing building permit; cause the contractor and/or property owner to enter into a binding agreement to memorialize the

understandings between the Town and the contractor and/or property owner relative to all conditions placed upon the lifting of the stop work order, if applicable; establish penalties for future right-of-way violations the amount for which shall be in the sole discretion of the Town Council; and/or collect any unpaid penalties.

- y. If a Stop Work Order is lifted, no additional right-of-way permits for the duration of the work in question shall be issued unless specifically approved by the Town Council.
- z. All Right-of-way fines and penalties shall be paid in full prior to issuance of a Certificate of Occupancy for the construction associated with the right-of-way activity that generated the fines, penalties, and interest.

3. Easements / Rights-of-Way Consent and Use Agreements

Placement of structures, walls, fences, slabs, turf blocks, private utility service lines, mechanical equipment, trees, hedges or other obstacles that would restrict access and maintenance of public utilities within an easement is prohibited unless an Easement Consent Form completed from each public utility has been properly executed and submitted to the Engineering Division. Additionally, an Agreement for Use of Rights-of-Way and/or Easements must be executed by the person or entity seeking to construct such prohibited obstacles within either an easement or right of way. The Agreement for Use of Rights-of-Way and/or Easements must be fully executed by the person or entity seeking to construct such prohibited obstacles within the easement and/or right of way and the Town of Palm Beach. The properly executed Agreement must be filed within the public records of Palm Beach County at the office of the Clerk of the Circuit Court at the applicant's expense. The Town of Palm Beach, at its sole discretion, shall have the ability to reject any request regarding usage of easement(s) and/or right of way for the purpose of placement of obstacles therein regardless of the written opinion of any applicable public utility as indicated within an approved Easement Consent Form or otherwise. The Easement Consent Form can be found on the Town of Palm Beach website at: <https://www.townofpalmbeach.com/423/Permits-and-Licenses>.

4. Everglades Island Bridge

The Everglades Island Bridge has a 20-ton weight limit. By separate permit, gross weight vehicles of up to 25 tons may cross the bridge provided sufficient documentation is presented to the Engineering Division to verify the weight of the vehicle. The owner of the vehicle must obtain the permit.

Under certain circumstances, equipment may be allowed to "walk" over the bridge. Special provisions must be defined by the Engineering Division to protect the bridge deck and for maintenance of traffic.

5. Yard Trash Placement

Yard Trash placed for collection by a property owner, occupant or agent shall be in compliance with the regulations hereinafter set forth:

- a. In the months of November through and including the month of April, trash may be placed on the public right-of-way, adjacent to the property from which it came, not more than one (1) day prior to the scheduled day of collection.
- b. During the months of May through and including the month of October, trash may be placed on the public right-of-way, adjacent to the property from which it came, not more than three (3) days prior to the scheduled day of collection.
- c. Trash placed for collection shall not extend more than six (6) feet into the street from the curb or pavement edge and shall not obstruct the street or sidewalk or create an unsafe condition as determined by the Chief of Police. Trash may not be placed on top of water / sewer / storm system valves, manhole lids, catch basin grates, or obstruct access to fire hydrants. If trash is placed in violation of this subsection, the person in violation shall be cited not only for violation of this section, but also for a violation of Section 106-1 of the Town Code of Ordinances relating to the obstruction of sidewalks and streets.
- d. These provisions shall not apply to the paved portion of the State Department of Transportation right- of-way within the Town or to the paved portions of County Road, Ocean Boulevard or North Lake Way, where the placement of trash is specifically prohibited.

6. Charge for Curbside Trash Placed Prior to the Authorized Collection Date

In the event any person places trash for collection in violation of the requirements set forth in the Yard Trash section above, that person shall be cited for violation of this section and, pay a fine in the amount prescribed in the fee schedule set forth in Section 2-439 of the Town Code of Ordinances, and shall otherwise be subject to the jurisdiction of the code enforcement board.

Appendix A

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REPLACEMENT OF FLEXIBLE PAVEMENT FOR PERMITTED PAVEMENT CUT

GENERAL NOTES

BASE AND BACKFILL MATERIALS SHALL BE EITHER OF THE SAME TYPE AND COMPOSITION AS THE MATERIALS REMOVED, OR OF EQUAL OR GREATER STRUCTURAL ADEQUACY. MATERIALS CONTAMINATED WITH DELETERIOUS SUBSTANCES DURING EXCAVATION SHALL NOT BE USED.

REPLACEMENT BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.

BASE MATERIAL SHALL BE PLACED IN TWO OR THREE LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO THE SPECIFIED DENSITY.

ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED AND BUTT-JOINTED.

SURFACE TREATED PAVEMENT JOINTS SHALL BE LAPPED AND FEATHERED.

SURFACE MATERIAL SHALL BE CONSISTENT WITH THE EXISTING SURFACE.

PIPE SHALL BE PLACED IN A DRY TRENCH UNLESS OTHERWISE APPROVED BY THE ENGINEERING DIVISION.

FOLLOW THE FDOT STANDARDS FOR APPLICATION OF PRIME AND TACK COATS.

ALL ROADWAY REPAIR WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE STANDARDS AND THE LATEST APPLICABLE FDOT STANDARDS, AS APPLICABLE.

DENSITY TESTS SHALL BE TAKEN IN 1 FOOT LIFTS ABOVE THE PIPE AT INTERVALS OF 300 FEET MAXIMUM (1 SET MINIMUM) OR AS DIRECTED BY THE ENGINEERING DIVISION. COPIES OF TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEERING DIVISION.

IF THE PAVEMENT IS NOT COMPLETELY RESTORED IMMEDIATELY FOLLOWING THE OPEN CUT, A SMOOTH, TEMPORARY PATCH SHALL BE INSTALLED PROPERLY MATCHING THE EXISTING GRADE OF THE ROADWAY. THE TEMPORARY PATCH SHALL BE ALLOWED TO REMAIN FOR A PERIOD NO LONGER THAN 60 DAYS. THE TOWN RESERVES THE RIGHT TO USE THE POSTED BOND TO COMPLETE RESTORATION WORK THAT HAS NOT BEEN COMPLETED WITHIN THE 60 DAY TIME PERIOD. ALTERNATE TEMPORARY TRENCH PROTECTION (STEEL PLATES, ETC.) MAY BE APPROVED BY THE ENGINEERING DIVISION UPON REQUEST.

FOR THE FINAL RESTORATION, THE ROAD SHALL BE MILLED AND RESURFACED (INCLUDING THE PATCHED/SURFACE REPLACEMENT AREA OVER THE TRENCH) WITH 1" MINIMUM THICKNESS ASPHALT MATCHING EXISTING MATERIALS FOR A FULL LANE WIDTH ENCROACHED UPON BY THE TRENCH INCLUDING A TRANSITION AREA OF 50 FEET ON EACH SIDE OF THE TRENCH.

MAGNETIC TAPE IS REQUIRED FOR ALL MAIN PRESSURE PIPES IN RIGHTS OF WAY AND EASEMENTS. INSTALL TAPE 24" BELOW GRADE DIRECTLY ABOVE THE INSTALLED PIPE.

CONTINUOUS 4-INCH-WIDE PAINT STRIPING IS REQUIRED FOR ANY WATERMAIN (BLUE), FORCEMAIN OR SANITARY MAIN (GREEN), OR GAS MAIN (YELLOW) THAT DOES NOT CONSIST OF INTEGRALLY COLORED PIPE MATERIAL.

RE-STRIPING IN THE RIGHT OF WAY SHALL BE THERMOPLASTIC TO MATCH EXISTING OR AS OTHERWISE APPROVED BY THE ENGINEERING DIVISION.

FOR ROADS NOT UNDER THE AUTHORITY OF THE TOWN OF PALM BEACH, THE APPROPRIATE ROAD AUTHORITY STANDARDS SHALL TAKE PRECEDENCE (I.E. FDOT)

	TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		REPLACEMENT OF FLEXIBLE PAVEMENT FOR PERMITTED PAVEMENT CUT	DRAWING NO. C-1A	
	REVISIONS:	DATE:		APPROVED:	EFFECTIVE:
					_____ TOWN ENGINEER

TABLE 100

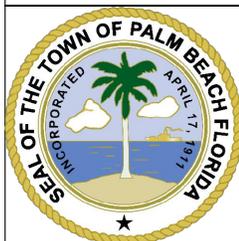
**TABLE OF MATERIALS AND CONSTRUCTION
STANDARDS: RESIDENTIAL ACCESS AND LOCAL
STREETS**

COMPONENT [1]	DESCRIPTION OF MATERIALS	CONSTRUCTION STANDARDS MINIMUM IN PLACE		NOTES
		THICKNESS [2]	METHOD	
A	TYPE S-1 OR SP 12.5 ASPHALTIC CONCRETE	1-1/2"	ONE (1) LIFT	MAY BE USED AS A STRUCTURAL COURSE BELOW S-3 OR SP-9.5 WEARING SURFACE. TACK COAT REQUIRED BETWEEN COURSES SN COEFF./IN. = 0.44
	TYPE S-3 OR SP-9.5 ASPHALTIC CONCRETE	2" MIN.	TWO (2) EQUAL LIFTS	TACK COAT REQUIRED WITH MULTIPLE LIFTS SN COEFF./IN. = 0.44
B	LIMEROCK	8" MIN.	COMPACTED	PRIME COAT SHALL BE USED BETWEEN THE FINISHED ROCK BASE AND FIRST LIFT OF ASPHALT LBR 100 MIN. SN COEFF./IN. = 0.18
	SHELLROCK	8" MIN.	COMPACTED	
	CRUSHED CONCRETE	8" MIN.	COMPACTED	
C	SUBGRADE	12"	COMPACTED	[3]
	SUBGRADE	12"	STABILIZED TYPE B	[4] SN COEFF./IN. = 0.08

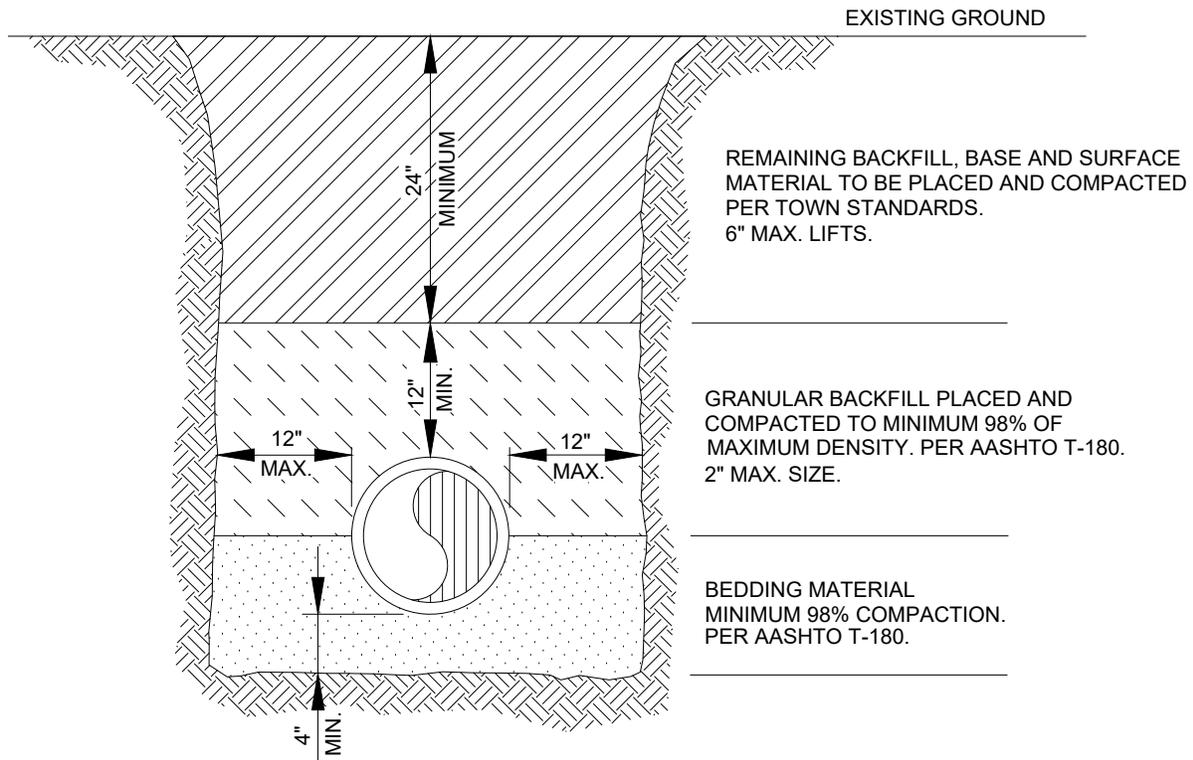
KEY	
[1]	A = PAVEMENT B = BASE C = SUBGRADE
[2]	ALL DIMENSIONS REFER TO COMPACTED THICKNESS.
[3]	NON-STABILIZED SUBGRADES MEETING THE COMPACTION REQUIREMENTS WILL BE CONSIDERED BY THE ENGINEERING DIVISION IF THE BASE COURSE DEPTH IS INCREASED BY A THICKNESS THAT YIELDS AN EQUIVALENT STRUCTURAL NUMBER.
[4]	STABILIZE TO L.B.R. VALUE OF 40

NOTES:

- MINOR ROADS SHALL HAVE A PAVEMENT SECTION WITH A STRUCTURAL NUMBER (SN) GREATER OR EQUAL TO 2.86
- MAJOR ROADS SHALL HAVE A PAVEMENT SECTION WITH A STRUCTURAL NUMBER (SN) GREATER THAN OR EQUAL TO 3.04
- ALL SUBGRADE AND BASE COURSES SHALL BE COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-180



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		TABLE 100	DRAWING NO. C-2
REVISIONS:	DATE:		
		APPROVED:	EFFECTIVE:
		TOWN ENGINEER	

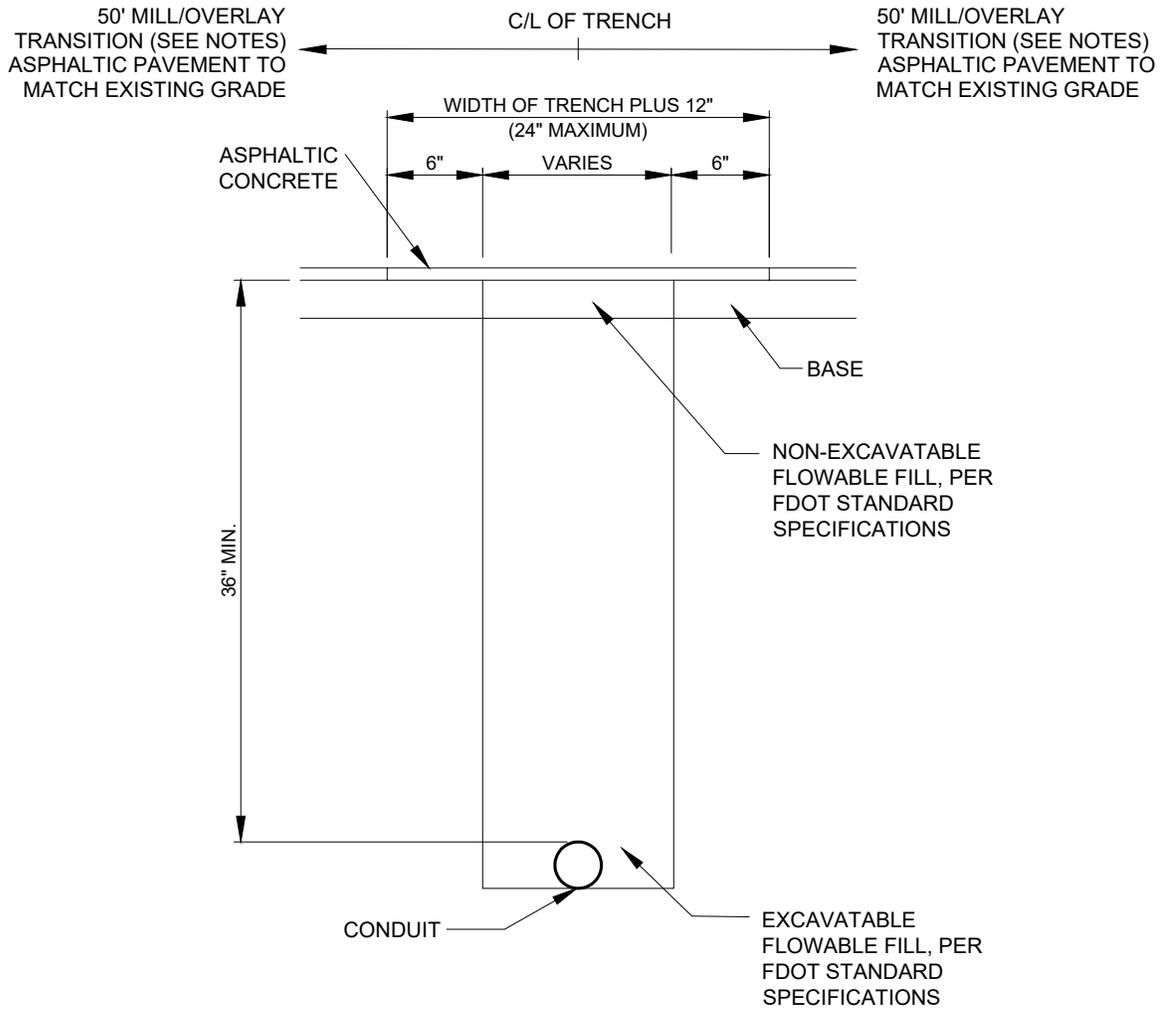


NOTE:

1. BEDDING SHALL CONSIST OF IN-SITU GRANULAR MATERIAL OR WASHED AND GRADED LIMEROCK 3/8" - 7/8" SIZING. UNSUITABLE INSITU MATERIALS SUCH AS MUCK, DEBRIS AND LARGER ROCK SHALL BE REMOVED.
2. THE PIPE SHALL BE FULLY SUPPORTED FOR ITS ENTIRE LENGTH WITH APPROPRIATE COMPACTION UNDER THE PIPE HAUNCHES.
3. THE PIPE SHALL BE PLACED IN A DRY TRENCH.
4. BACKFILL SHALL BE FREE OF UNSUITABLE MATERIAL SUCH AS LARGER ROCK, MUCK AND DEBRIS.
5. DENSITY TESTS SHALL BE TAKEN IN 1 FOOT LIFTS ABOVE THE PIPE AT INTERVALS OF 300 FEET MAXIMUM (1 SET MINIMUM) OR AS DIRECTED BY THE ENGINEERING DIVISION. COPIES OF TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEERING DIVISION.
6. THE PERMITTEE SHALL BE REQUIRED TO COMPLY WITH ALL TRENCH SAFETY AND OSHA LAWS AND REGULATIONS.
7. SEE SEPARATE DETAIL FOR PAVED AREAS.
8. MAGNETIC TAPE IS REQUIRED FOR ALL MAIN PRESSURE PIPES IN RIGHTS OF WAY AND EASEMENTS. INSTALL TAPE 24" BELOW GRADE DIRECTLY ABOVE THE INSTALLED PIPE.
9. CONTINUOUS 4-INCH-WIDE PAINT STRIPING IS REQUIRED FOR ANY WATERMAIN (BLUE), FORCEMAIN OR SANITARY MAIN (GREEN), OR GAS MAIN (YELLOW) THAT DOES NOT CONSIST OF INTEGRALLY COLORED PIPE MATERIAL.

TYPICAL TRENCH DETAIL

	TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		TYPICAL TRENCH DETAIL	DRAWING NO. C-3
	REVISIONS:	DATE:		APPROVED: TOWN ENGINEER



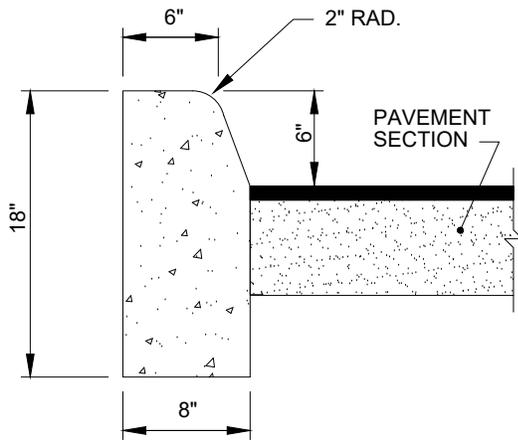
FOR USE IN INSTALLING CONDUIT UNDER EXISTING ASPHALT PAVEMENT NOT ADJACENT TO GUTTER WHEN TRENCHLESS METHODS ARE NOT FEASIBLE

NOTES:

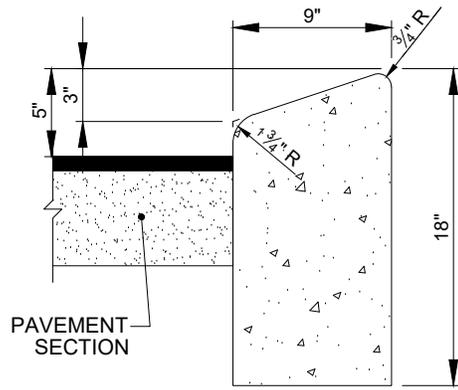
1. RIGID CONDUIT MUST BE USED WHEN JACKING UNDER EXISTING PAVEMENT AT 3 FT. MAXIMUM DEPTH.
2. ASPHALT TO BE SAWCUT AT THE EDGES OF THE TRENCH.
3. FOR THE FINAL RESTORATION, THE ROAD SHALL BE MILLED AND RESURFACED (INCLUDING THE PATCHED/SURFACE REPLACEMENT AREA OVER THE TRENCH) WITH 1" MINIMUM THICKNESS ASPHALT MATCHING EXISTING MATERIALS FOR A FULL LANE WIDTH ENCROACHED UPON BY THE TRENCH INCLUDING A TRANSITION AREA OF 50 FEET ON EACH SIDE OF THE TRENCH.



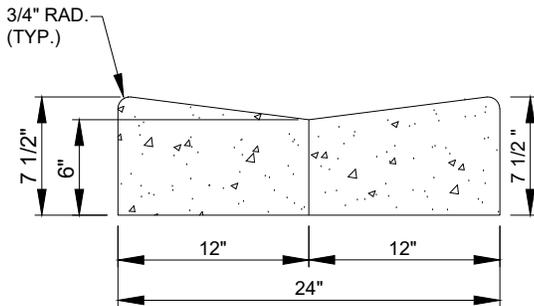
TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		EXCAVATED CONDUIT UTILITY TRENCHING	DRAWING NO. C-4
REVISIONS:	DATE:		
		APPROVED:	EFFECTIVE:
		TOWN ENGINEER	



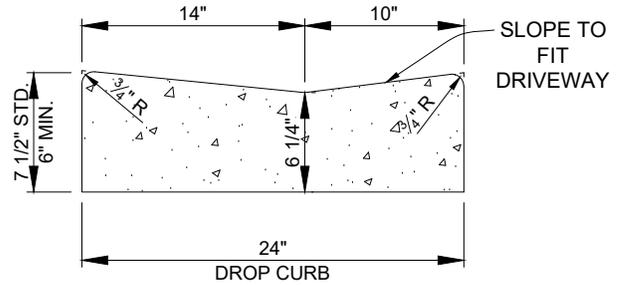
TYPE D CURB



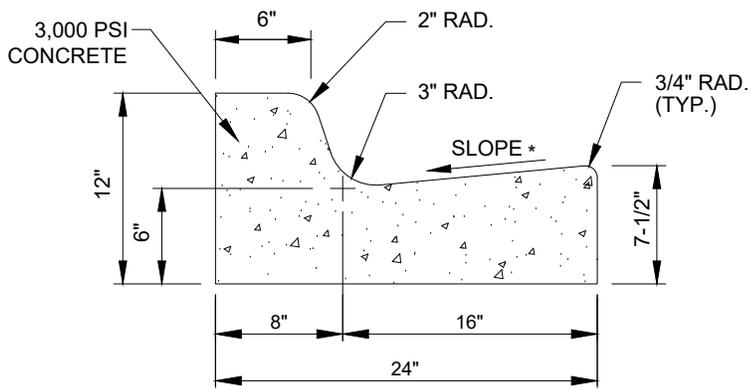
TYPE B CURB



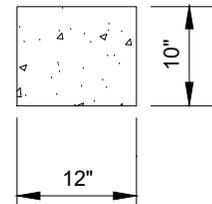
2' VALLEY GUTTER - SYMMETRICAL



DROP CURB



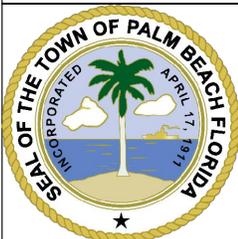
TYPE F-CURB AND GUTTER



FLUSH HEADER CURB
N.T.S.

NOTES:

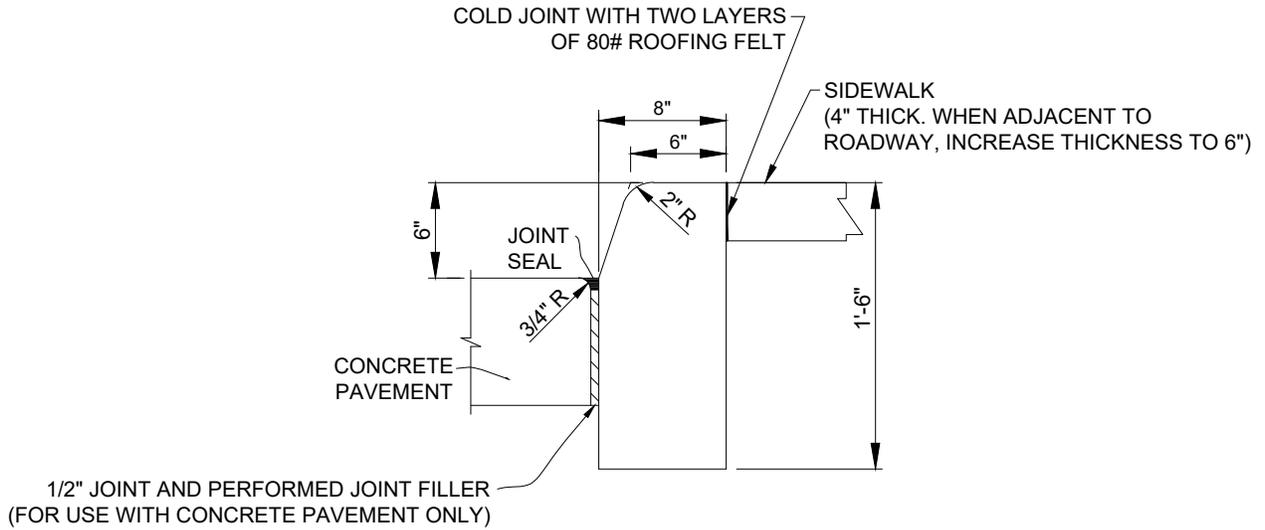
- *WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6"
- CURBS SHALL MEET THE REQUIREMENTS FDOT STANDARD INDEX 300



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

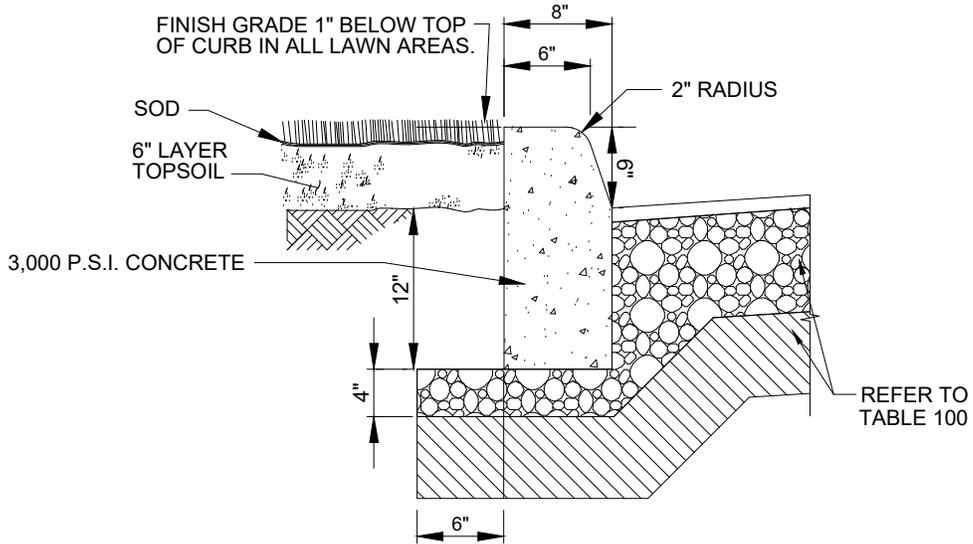
CURB DETAILS
APPROVED:
TOWN ENGINEER

DRAWING NO. C-5
EFFECTIVE:



NOTE: FOR USE ADJACENT TO CONCRETE OR FLEXIBLE PAVEMENT, CONCRETE SHOWN.

CURB AND SIDEWALK



CURB ADJACENT TO LANDSCAPE AREA

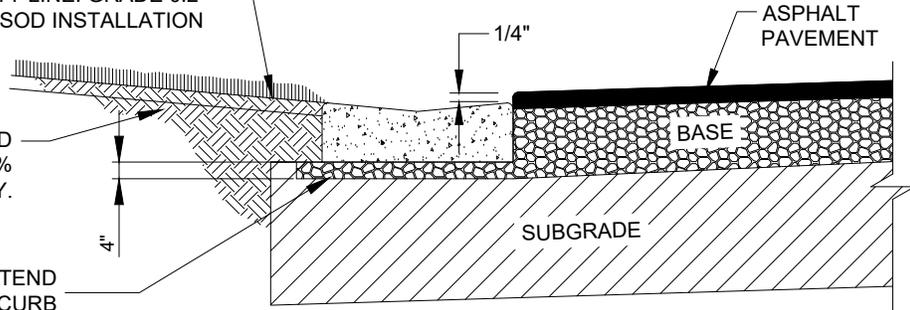


TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		CURB DETAILS	DRAWING NO. C-6
REVISIONS:	DATE:		APPROVED:
		TOWN ENGINEER	

SOD OR MATCH EXISTING SURFACE TREATMENT ON COMPACTED SHOULDER TO PATHWAY OR PROPERTY LINE. GRADE 0.2' BELOW PLAN GRADE FOR SOD INSTALLATION

COMPACTED BEHIND CURB 2' MIN. TO 95% MAXIMUM DRY DENSITY.

CURB PAD TO EXTEND 6" MIN. BEYOND CURB

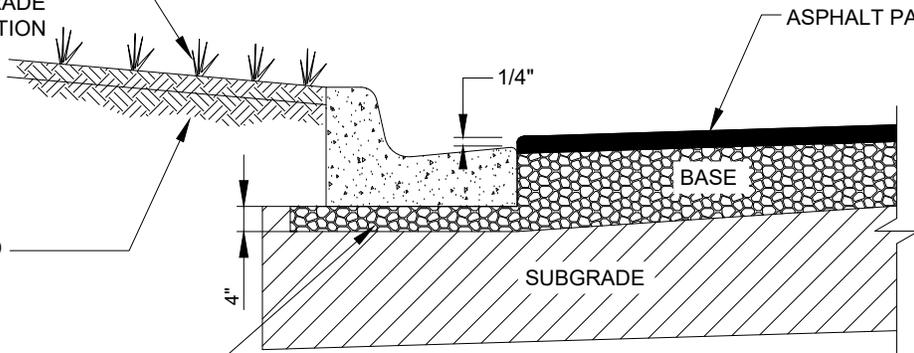


VALLEY GUTTERS

FULL SOD OR MATCH EXISTING SURFACE TREATMENT ON COMPACTED SHOULDER TO PATHWAY OR PROPERTY LINE. GRADE 0.2' BELOW PLAN GRADE FOR SOD INSTALLATION

COMPACT BEHIND CURB 2' MIN. TO 95% MAXIMUM DENSITY

CURB PAD TO EXTEND 6" MIN. BEYOND CURB

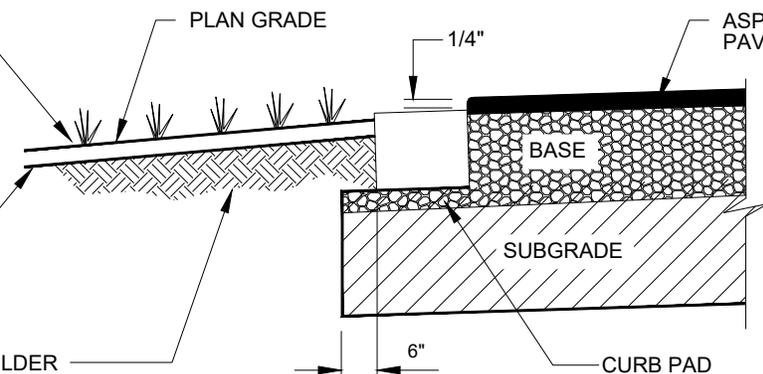


NON-MOUNTABLE CURB AND GUTTER (TYPE F-CURB SHOWN, TYPE D CURB SIMILAR)

FULL SOD OR MATCH EXISTING TREATMENT ON COMPACTED SHOULDER TO PATHWAY OR PROPERTY LINE

GRADE 0.2' BELOW PLAN GRADE FOR SOD INSTALLATION

8' WIDE COMPACTED SHOULDER



SWALE



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT

REVISIONS:

DATE:

LOCAL STREET PAVEMENT EDGE DETAILS

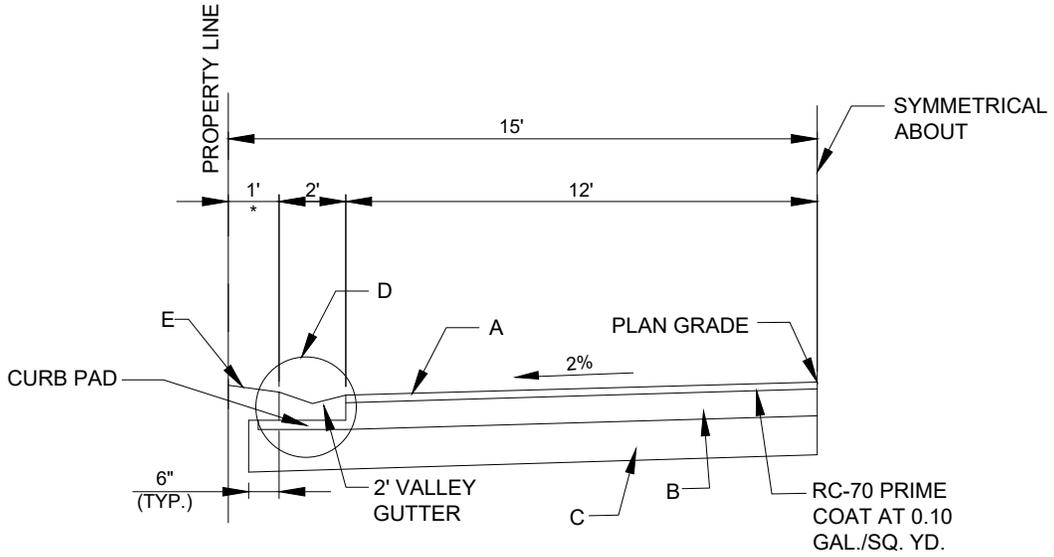
DRAWING NO.

C-7

APPROVED:

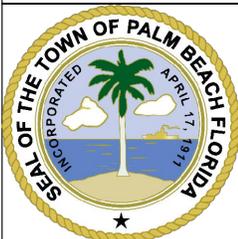
EFFECTIVE:

TOWN ENGINEER



* NOTE: FULL SOD

- A. WEARING SURFACE: SEE TABLE 100
- B. BASE: SEE TABLE 100
- C. SUBGRADE: SEE TABLE 100
- D. PAVEMENT EDGE: SEE LOCAL STREET PAVEMENT EDGE DETAILS.
- E. 25% MAXIMUM SLOPE. NOT TO EXCEED 10% IN LOT ACCESS & DRIVEWAY AREAS.



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

REVISIONS:

DATE:

30' RESIDENTIAL
ACCESS STREET
(CROWN)

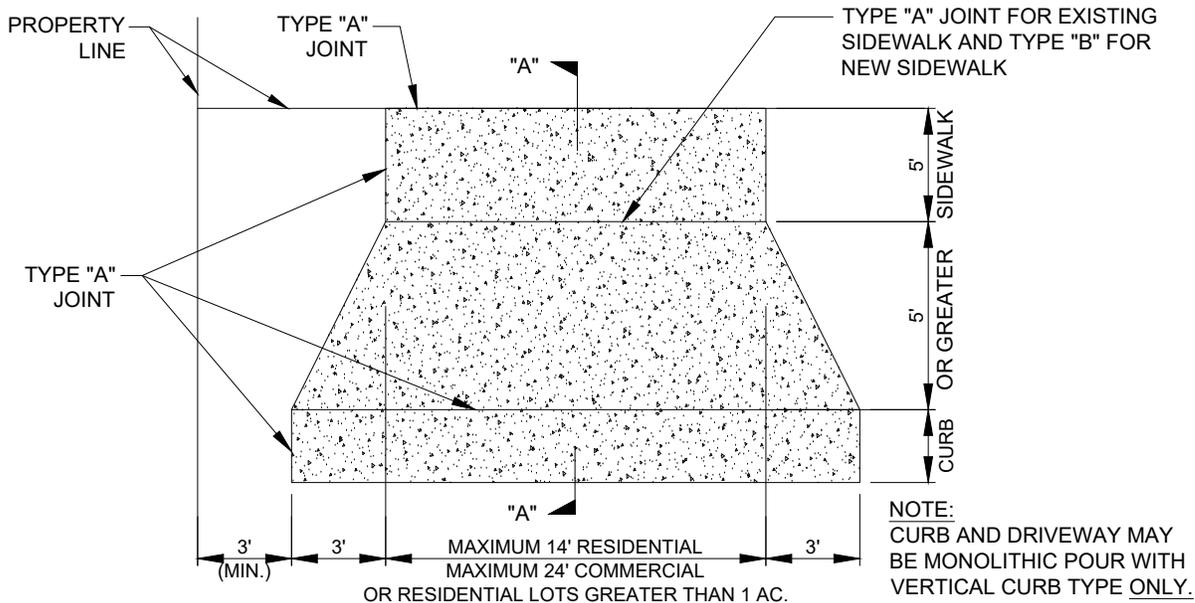
DRAWING NO.

C-8

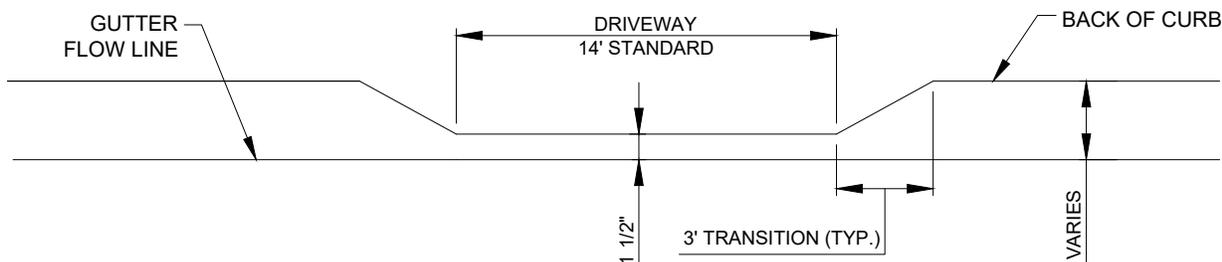
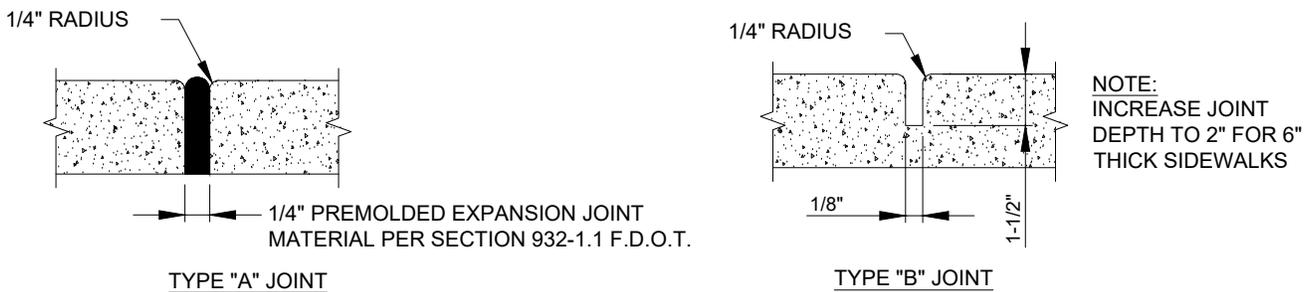
APPROVED:

EFFECTIVE:

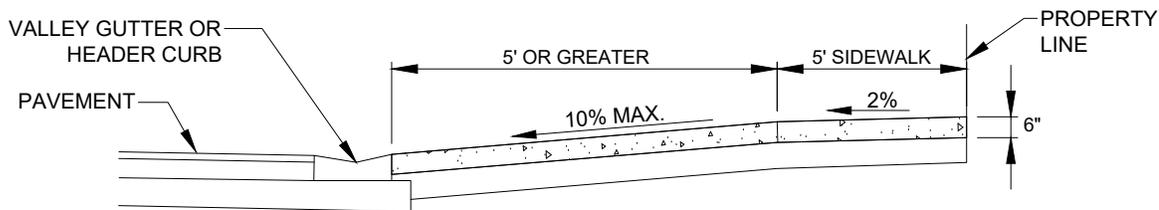
TOWN ENGINEER



PLAN



CURB TRANSITION PROFILE



SEE DETAIL

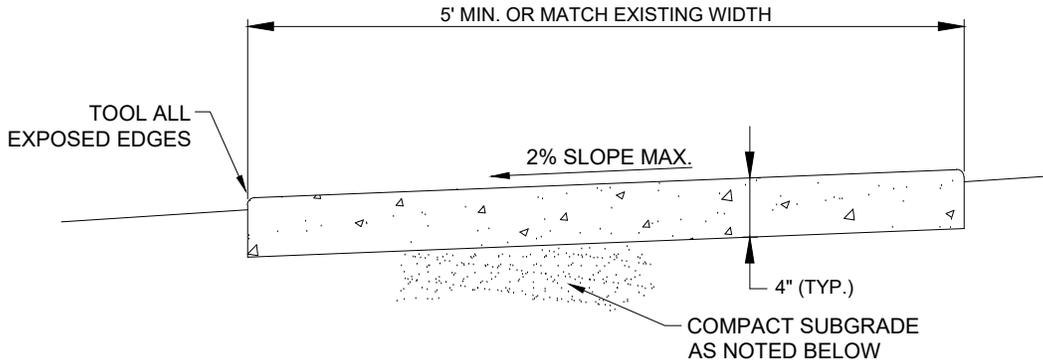
SECTION A-A

SECTION A-A

1. DRIVEWAY TO BE PORTLAND CEMENT, MIN. 3000 P.S.I. @ 28 DAYS.
2. BASE TO BE MINIMUM 12" CLEAN SAND OR SANDY LOAM, FULLY COMPACTED, 98% MAX. DRY DENSITY AASHTO T-180, FULL WIDTH.
3. CONCRETE TO BE BROOM FINISHED WITH EVEN, DUSTLESS SURFACE.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		RESIDENTIAL DRIVEWAY CURB & GUTTER SECTION (CONCRETE)	DRAWING NO. C-9
REVISIONS:	DATE:		EFFECTIVE:
		APPROVED:	
		TOWN ENGINEER	



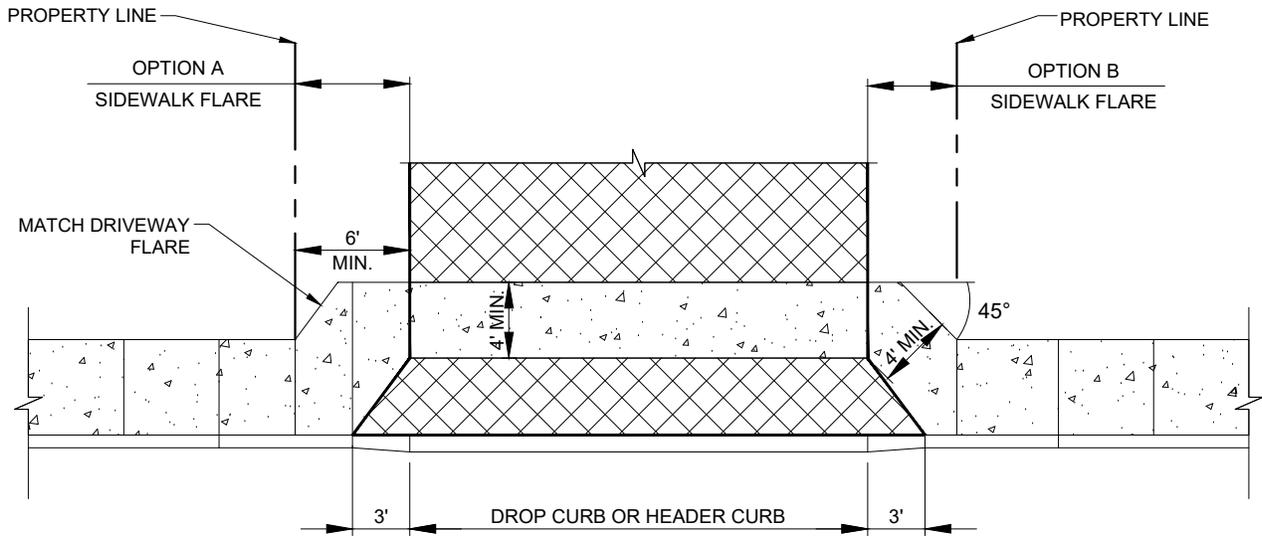
TYPICAL SECTION

NOTES:

1. PROVIDE EXPANSION JOINTS BETWEEN SIDEWALK AND DRIVEWAYS, SIDEWALK, OR AT ANY OTHER RIGID STRUCTURE.
2. EXPANSION JOINTS SHALL BE PROVIDED AT 120 FT. MAXIMUM SPACING.
3. ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3,000 P.S.I. (MIN.) @ 28 DAYS FOR SIDEWALKS.
4. MINIMUM THICKNESS OF SIDEWALK SHALL BE AS NOTED ABOVE. INCREASE SIDEWALK THICKNESS TO 6" ACROSS DRIVEWAYS AND WHEN SIDEWALK IS ADJACENT TO VEHICULAR AREAS.
5. FOR SIDEWALKS OR DRIVEWAYS WITHIN R.O.W., COMPACT SUBGRADE TO 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.

CONCRETE SIDEWALK DETAIL

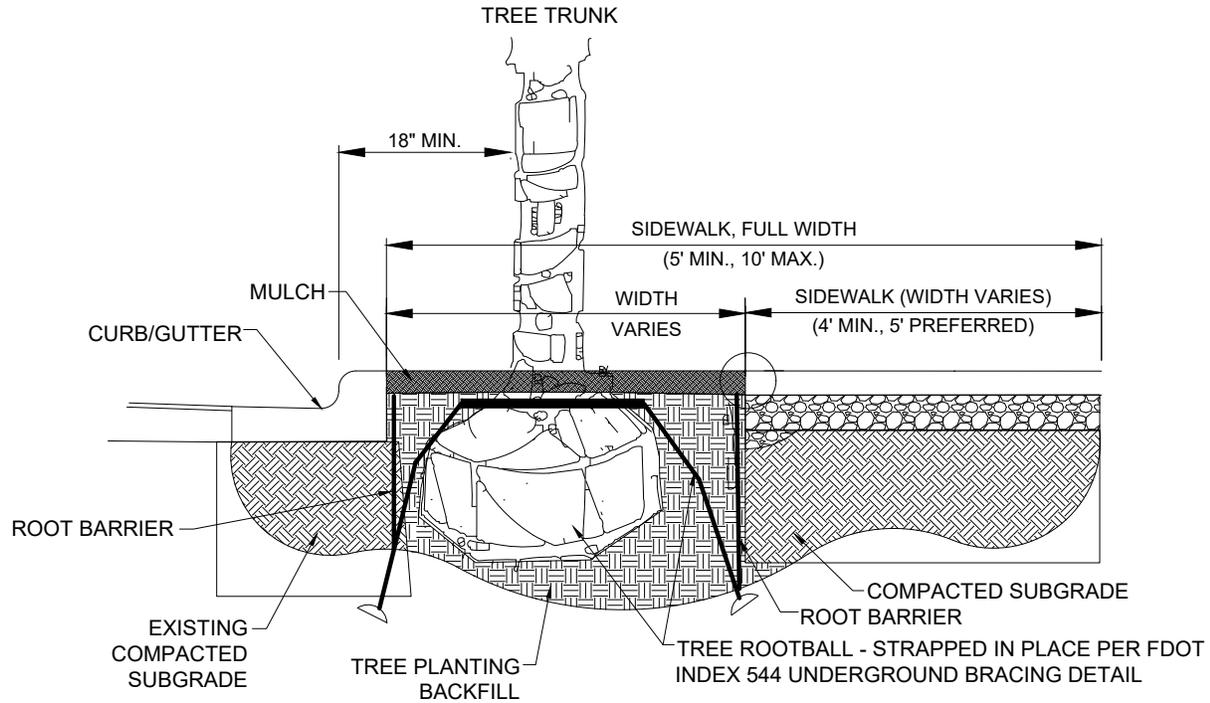
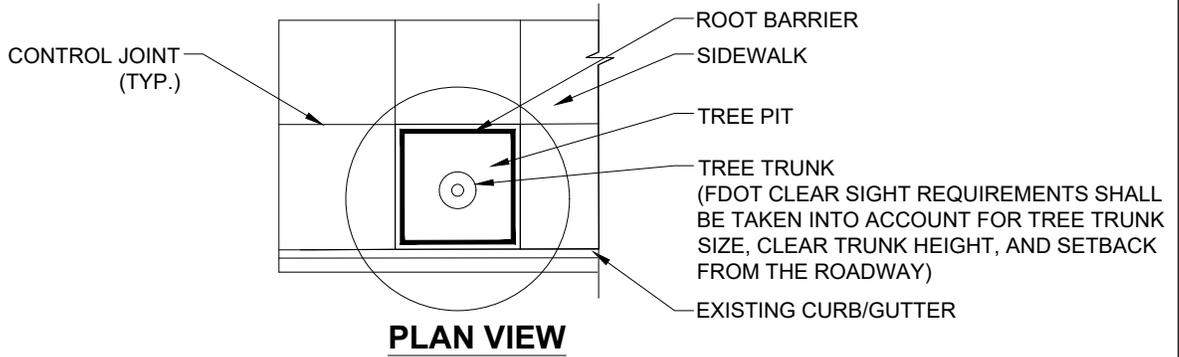
NOT TO SCALE



SIDEWALK/DRIVEWAY WITHOUT UTILITY STRIP



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		CONCRETE SIDEWALK DETAILS	DRAWING NO. C-10
REVISIONS:	DATE:		APPROVED: TOWN ENGINEER



NOTES:

1. TREES SHOWN ON THIS PLAN ARE FOR GRAPHIC REPRESENTATION ONLY.
2. TREES MAY BE FIELD ADJUSTED TO AVOID CONFLICTS WITH DRIVEWAYS AND UNDERGROUND UTILITIES
3. TREES ARE TO BE INSTALLED WITH A ROOT BARRIER SYSTEM.
4. IN NO CASE SHALL A TREE ENCR OACH INTO A UTILITY EASEMENT WITHOUT PRIOR APPROVAL.

ROOT BARRIER NOTES:

MANUFACTURER: CENTURY ROOT BARRIER (OR EQUAL)
714-632-7083

SIZE: 36" DEEP

MATERIAL: POLYETHYLENE WITH ULTRAVIOLET INHIBITORS

THICKNESS: 0.085" (MIN.)

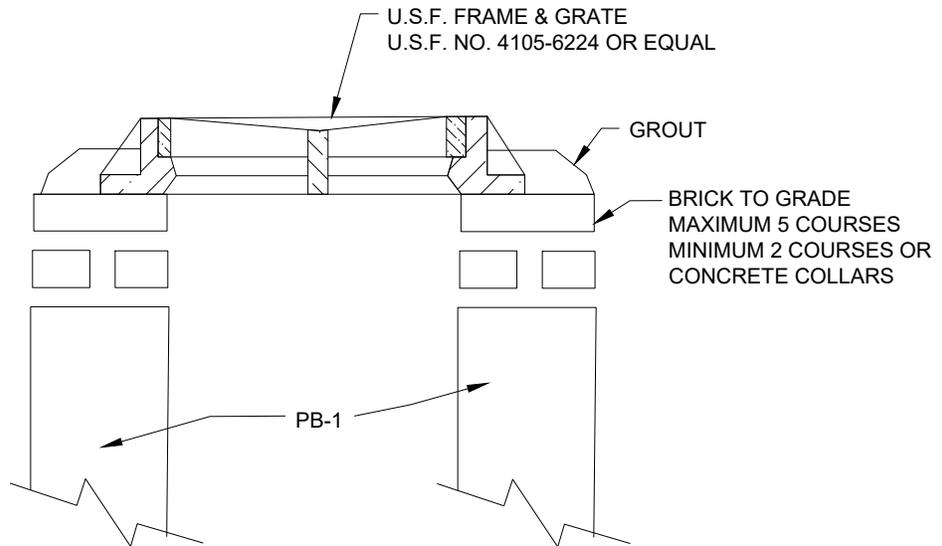
INSTALLATION: INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

TREE PIT DETAIL
APPROVED:
TOWN ENGINEER

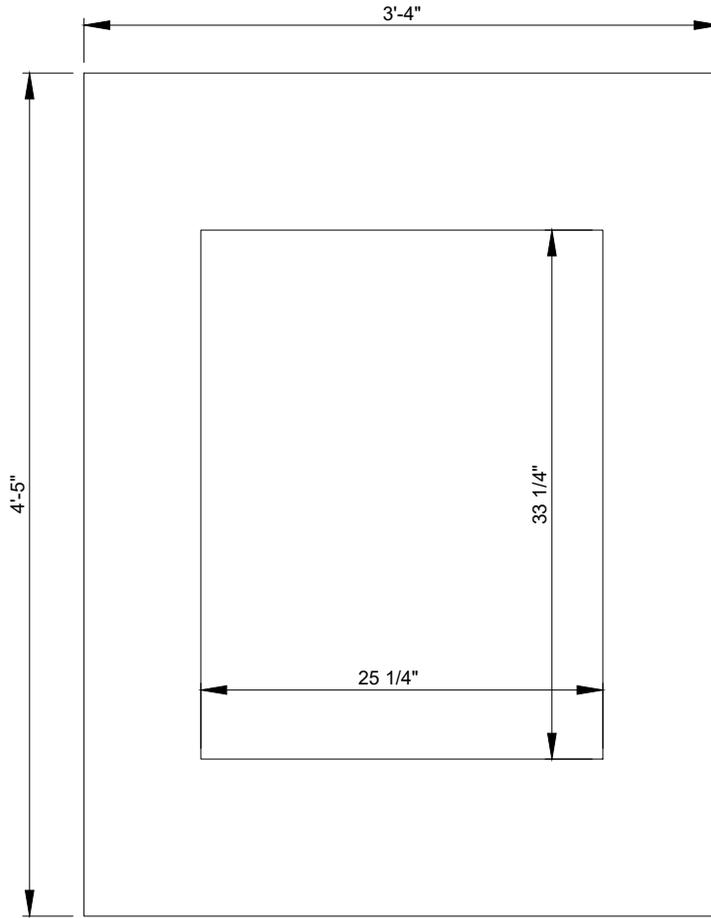
DRAWING NO. C-11
EFFECTIVE:



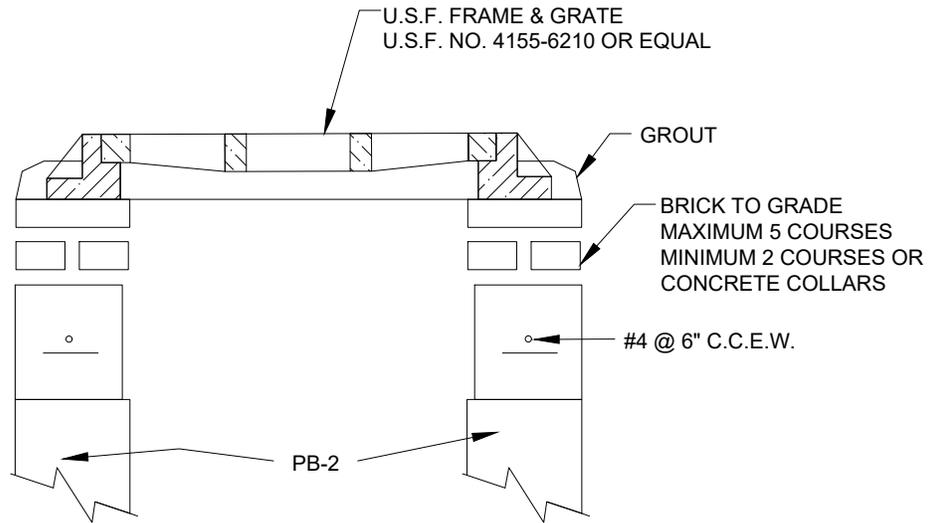
TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

INLET TOP 4155-6210
APPROVED:
_____ TOWN ENGINEER

DRAWING NO. D-1
EFFECTIVE:



PLAN



SECTION



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

INLET TOP 4155-6210

DRAWING NO.

D-2

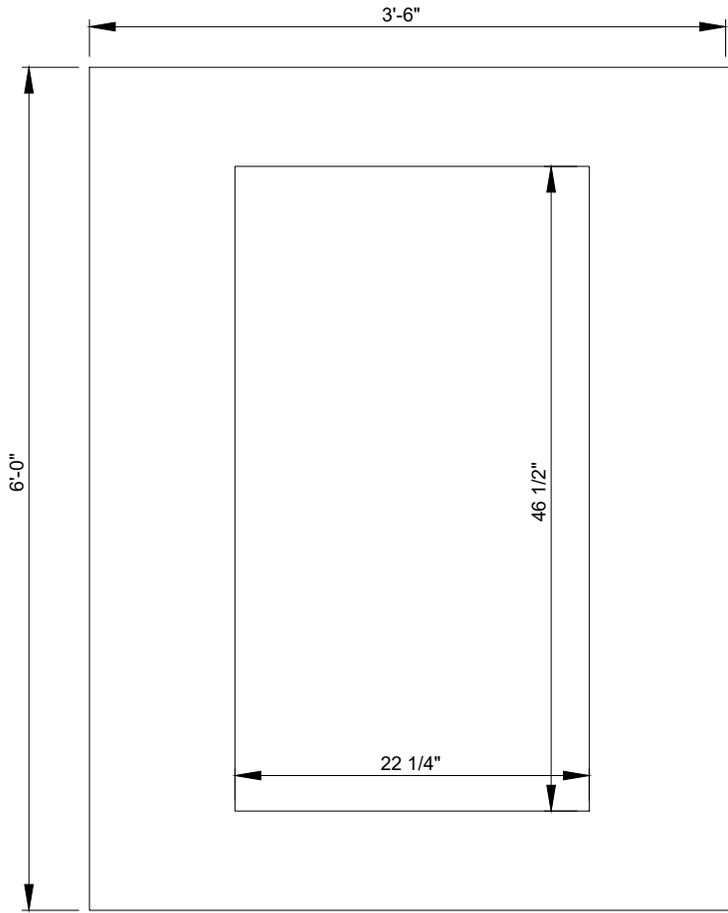
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DATE:

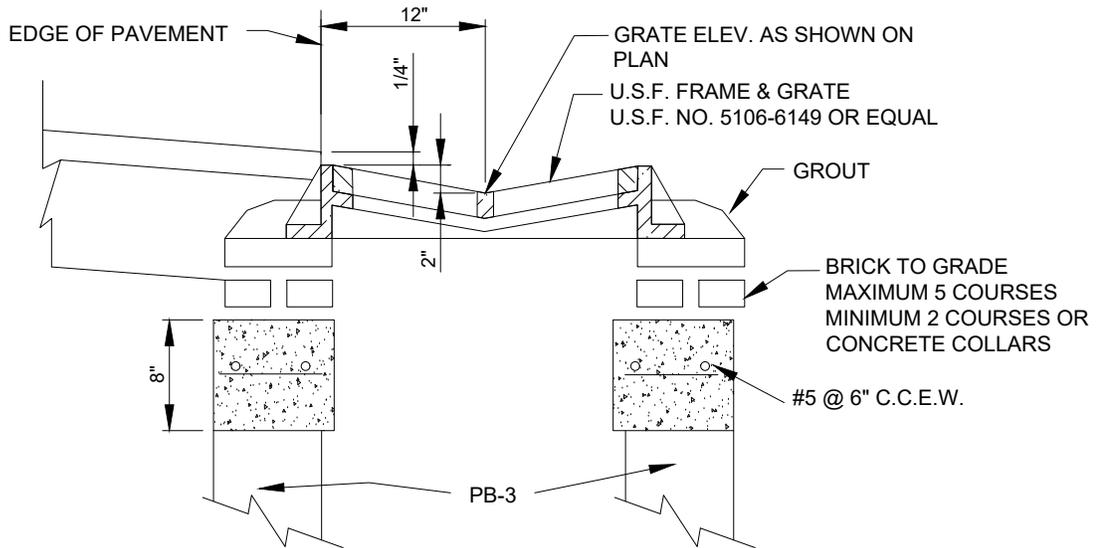
APPROVED:

EFFECTIVE:

TOWN ENGINEER



PLAN



SECTION



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

INLET TOP 5106-6149

DRAWING NO.

D-3

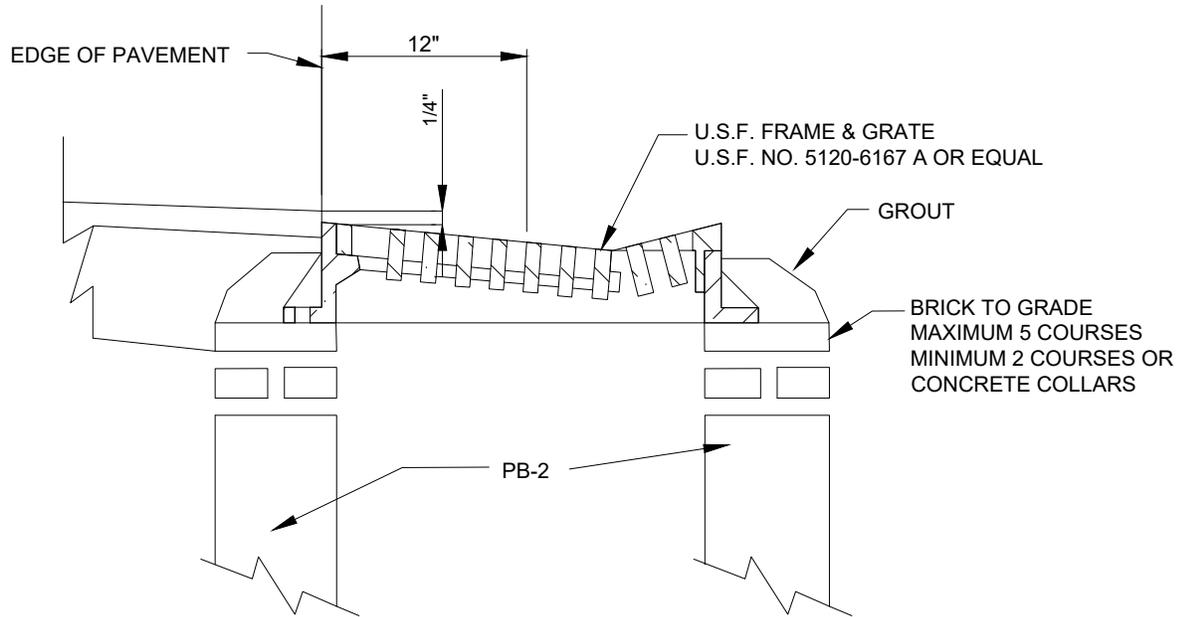
REVISIONS:

DATE:

APPROVED:

EFFECTIVE:

TOWN ENGINEER



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

INLET TOP 5120-6167

DRAWING NO.

D-4

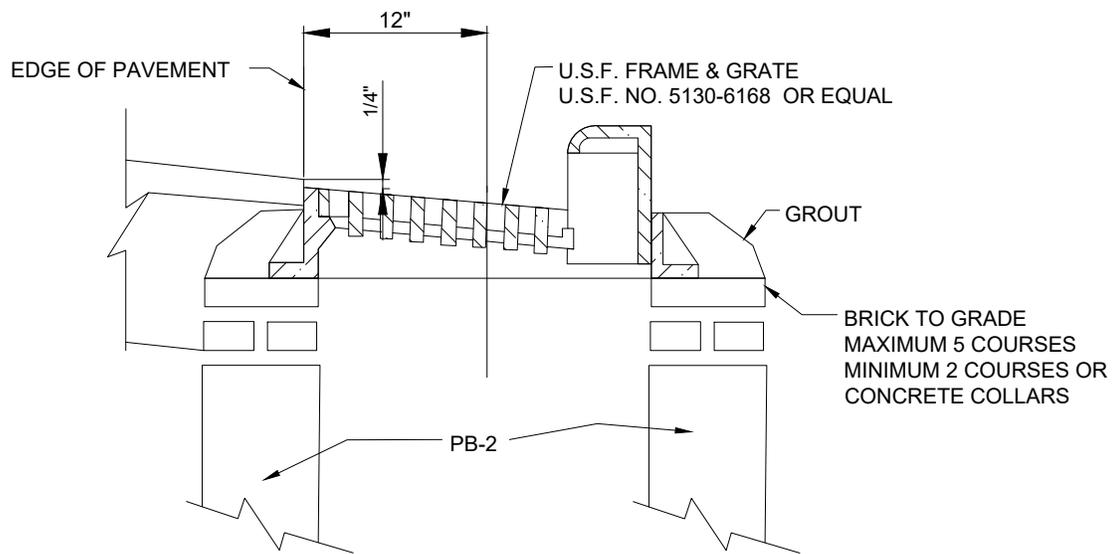
REVISIONS:

DATE:

APPROVED:

EFFECTIVE:

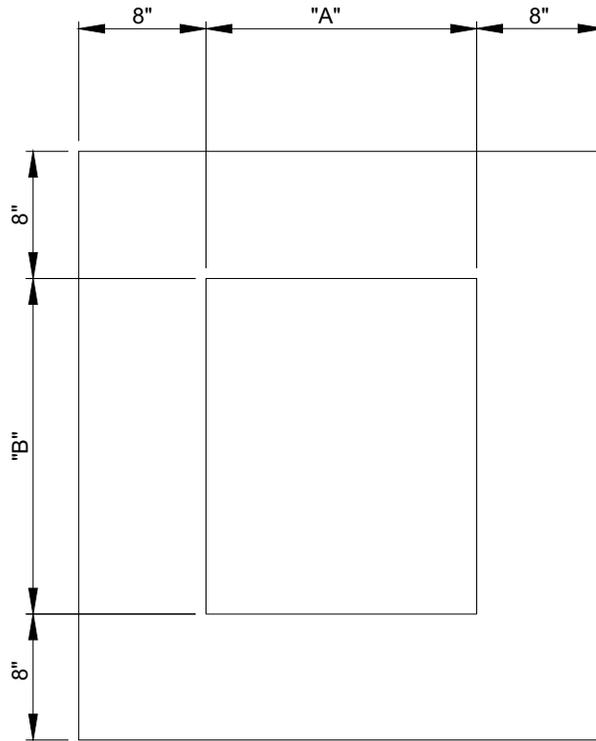
TOWN ENGINEER



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

INLET TOP 5130-6168
APPROVED:
_____ TOWN ENGINEER

DRAWING NO. D-5
EFFECTIVE:



PLAN

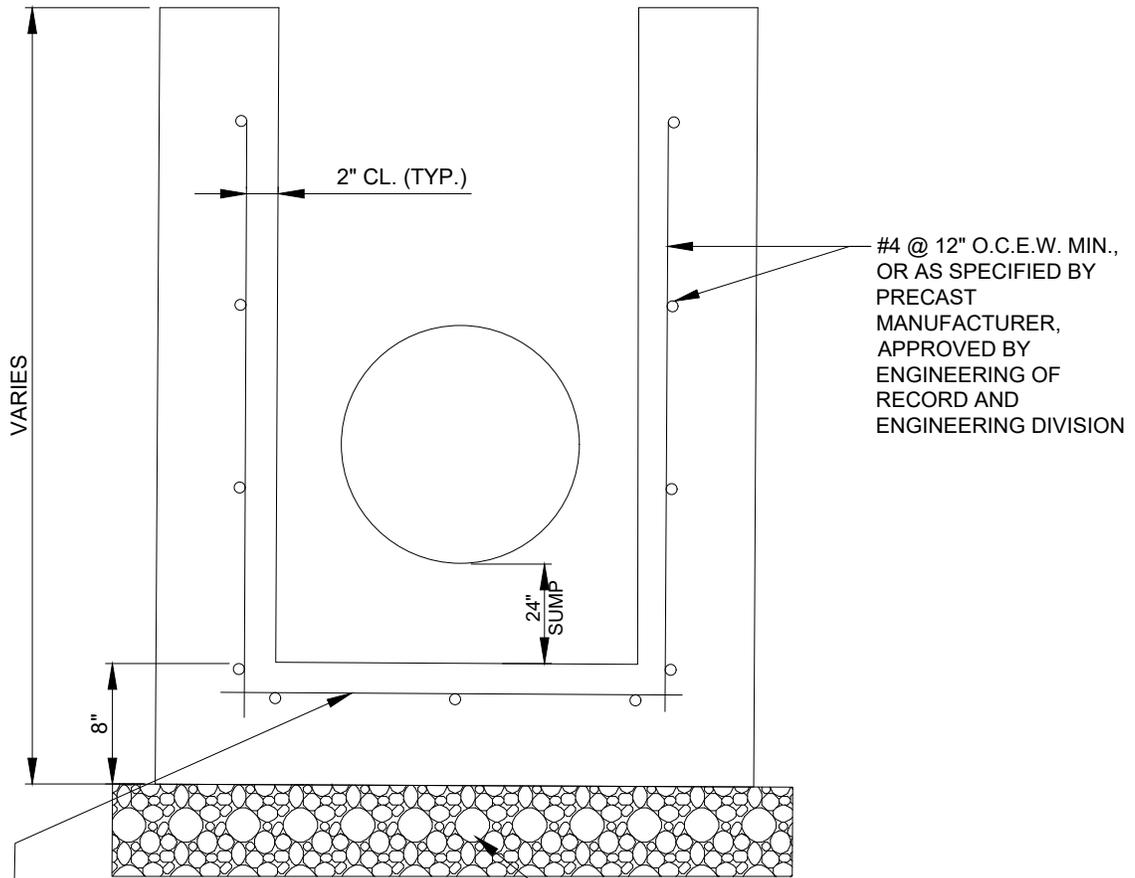
INLET TYPE	DIMENSION "A"	DIMENSION "B"
PB-1	1'-5"	2'-3"
PB-2	2'-0"	3'-1"
PB-3	4'-0"	6'-0"



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

INLET BOTTOM (PLAN)
APPROVED: _____
TOWN ENGINEER

DRAWING NO. D-6
EFFECTIVE:



#4 @ 12" O.C.E.W. MIN., OR AS SPECIFIED BY PRECAST MANUFACTURER, APPROVED BY ENGINEERING OF RECORD AND ENGINEERING DIVISION

12" 3/4 WASHED ROCK WRAPPED IN FILTER FABRIC MIRAFI 140 OR EQUAL

SECTION

INLET TYPES: INLETS ARE TO BE SHOWN HEREON. REVOLVE POSITION TO ACCOMMODATE LARGER DIAMETER PIPE SIZE.

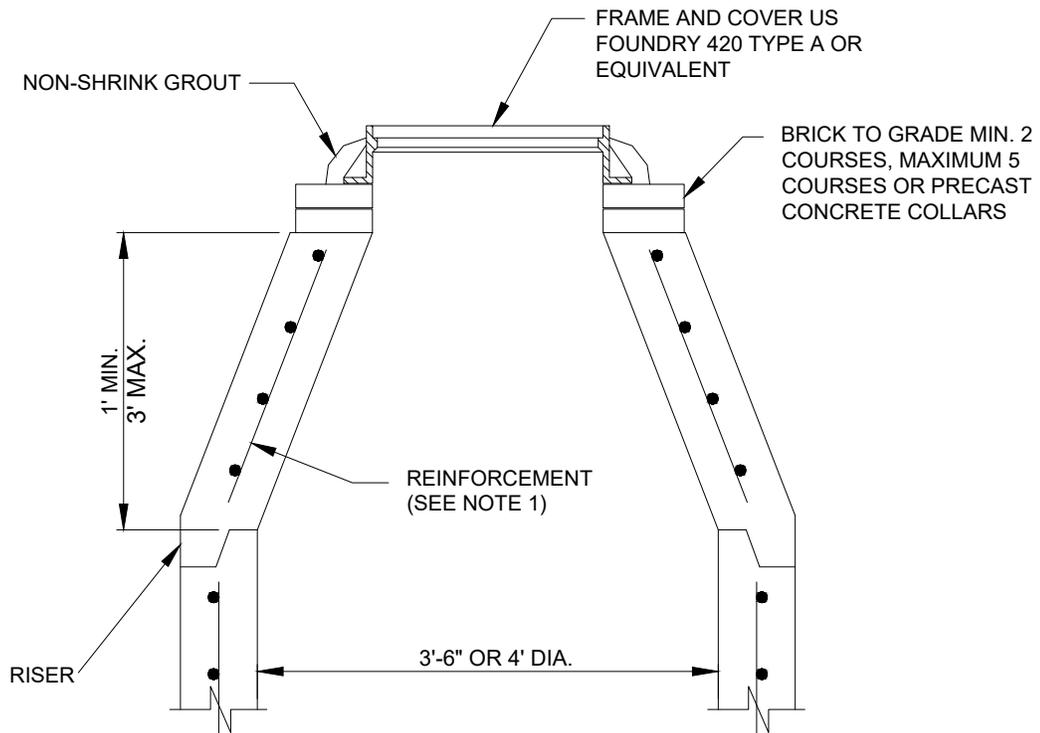
MATERIAL: INLET WALLS AND FOOTING MAT BE EITHER POURED-IN-PLACE 4000 PSI CONCRETE; OR PRECAST CLASS "A" 4000 PSI CONCRETE.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

INLET BOTTOM (SECTION)
APPROVED:
_____ TOWN ENGINEER

DRAWING NO. D-7
EFFECTIVE:



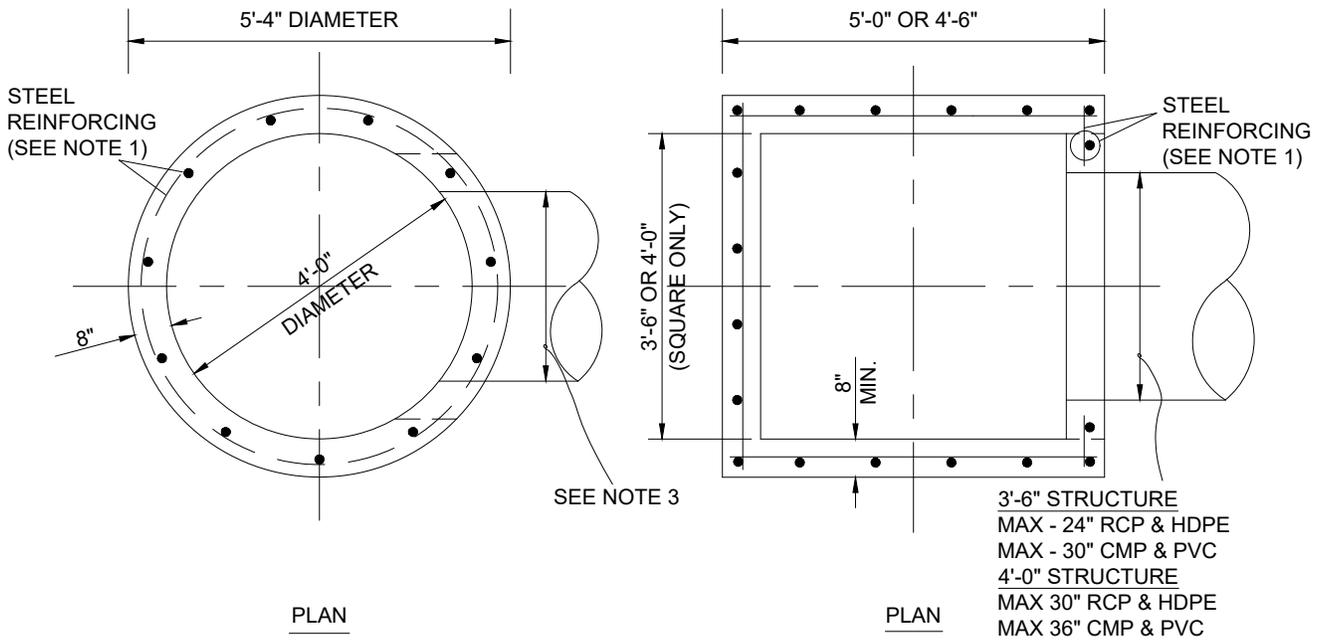
PRECAST CONCENTRIC CONE

NOTE:

1. MANHOLE TOP MAY TO OF CAST-IN-PLACE OR PRECAST CONCRETE CONSTRUCTION. FOR CONCRETE CONSTRUCTION, THE CONCRETE AND STEEL REINFORCEMENT SHALL BE THE SAME AS THE SUPPORTING WALL UNIT. AN ECCENTRIC CONE MAY BE USED.

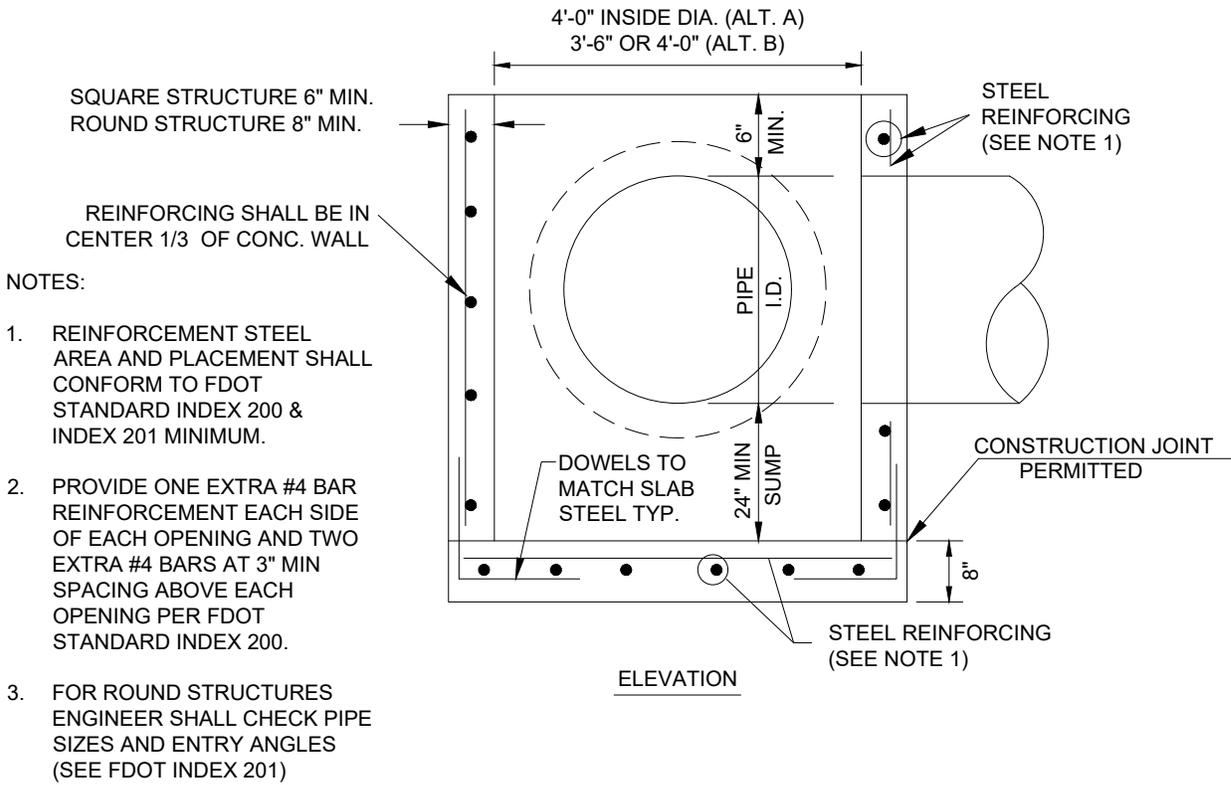


TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		STORM MANHOLE TOP	DRAWING NO. D-8
REVISIONS:	DATE:		EFFECTIVE:
		APPROVED:	
		TOWN ENGINEER	



ALTERNATE A

ALTERNATE B

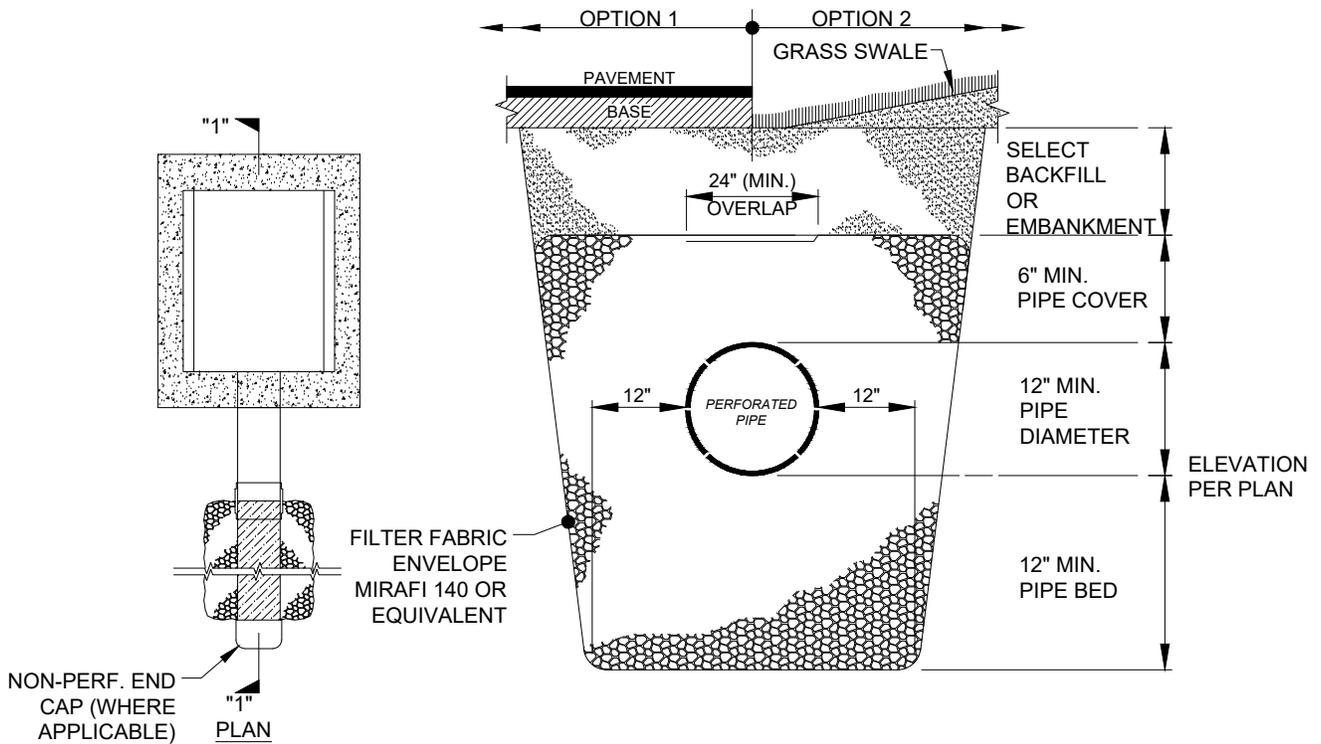


TYPE "P" - MANHOLE & INLET STRUCTURE BOTTOM

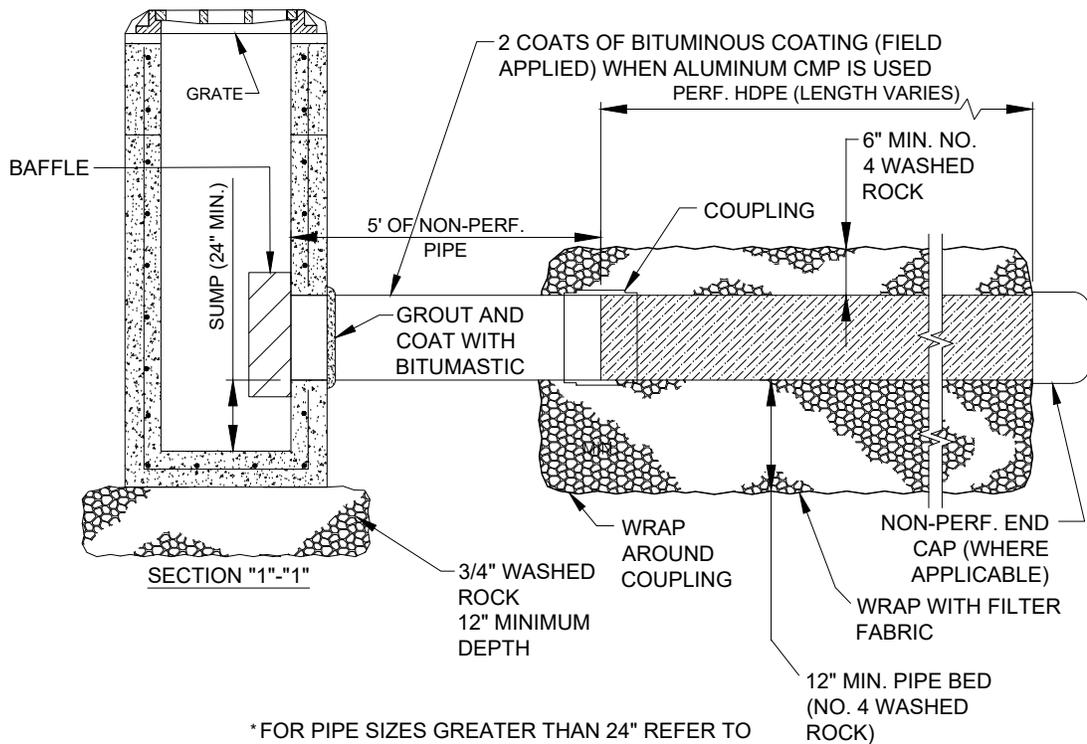
NOT TO SCALE



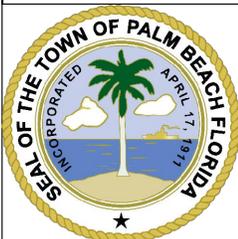
TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		STORM MANHOLE BOTTOM	DRAWING NO. D-9
REVISIONS:	DATE:		EFFECTIVE:
		APPROVED:	
		TOWN ENGINEER	



TYPICAL EXFILTRATION TRENCH CROSS SECTION



* FOR PIPE SIZES GREATER THAN 24" REFER TO MANUFACTURERS RECOMMENDATION & SUBMIT FOR ENGINEERING DIVISION APPROVAL



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

EXFILTRATION TRENCH
APPROVED:
TOWN ENGINEER

DRAWING NO. D-10
EFFECTIVE:

#4 @ 12" O.C.E.W. MIN.,
OR AS SPECIFIED BY
PRECAST
MANUFACTURER,
APPROVED BY
ENGINEERING OF
RECORD AND
ENGINEERING DIVISION

WELD 14 GA.
ALUMINUM PLATE TO
CMP

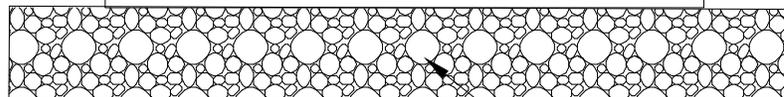
ALUMINUM CMP BAFFLE
OPEN AT BOTTOM 24"
DIA. MINIMUM OR ONE
SIZE LARGER THAN
DISCHARGE PIPE

PB-2 STRUCTURE OR
LARGER AS REQUIRED.

DISCHARGE PIPE
(SIZE VARIES)

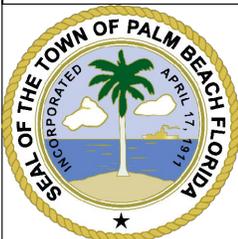
INV. EL. (SEE PLANS)

18"



12" 3/4 WASHED ROCK
WRAPPED IN FILTER
FABRIC MIRAFI 140 OR
EQUAL

SECTION



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

POLLUTION CONTROL
STRUCTURE SHEET 1

DRAWING NO.

D-11

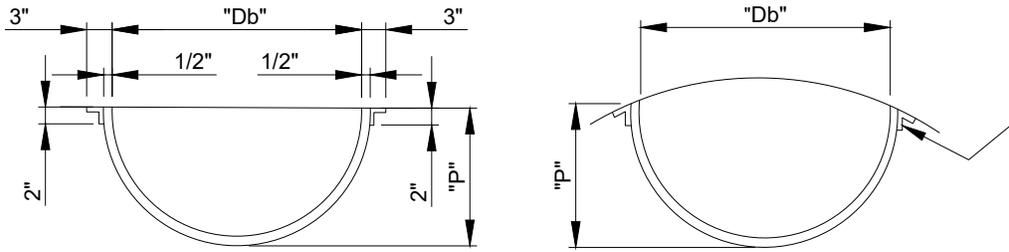
REVISIONS:

DATE:

APPROVED:

EFFECTIVE:

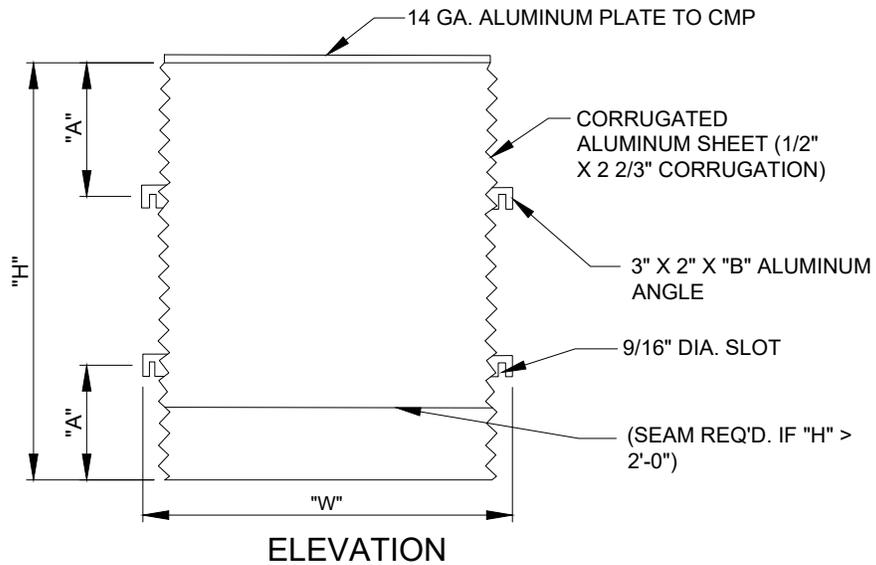
TOWN ENGINEER



PIPE DIA.	BAFFLE DIA.	GUAGE	HEIGHT	WIDTH	DEPTH	EAR LENGTH	PERCENT OF PIPE AREA
	"DB"	"B"	"H"	"W"	"P"	"A"	
12	24	16	33	31	12.5	8	65.3
15	24	16	33	31	12.5	8	65.3
18	24	16	33	31	12.5	8	65.3
21	24	16	33	31	12.5	8	65.3
24	30	16	36	37	15.5	9	78.1
27	36	16	39	43	18.5	10	88.9
30	36	16	42	43	18.5	11	72.0
36	42	16	48	49	21.5	12	68.1
42	48	16	54	55	24.5	14	65.3
48	54	16	60	61	27.5	15	63.3
54	60	14	66	67	30.5	17	61.7
60	66	14	72	73	33.5	18	60.5
66	72	14	78	79	36.5	20	59.5
72	84	14	84	91	42.5	21	68.1

NOTE: ALL DIMENSIONS ARE IN INCHES.

CONTRACTOR TO CONFIRM THAT BAFFLE WILL FIT STRUCTURE I.D.



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

REVISIONS:

DATE:

POLLUTION CONTROL
STRUCTURE SHEET 2

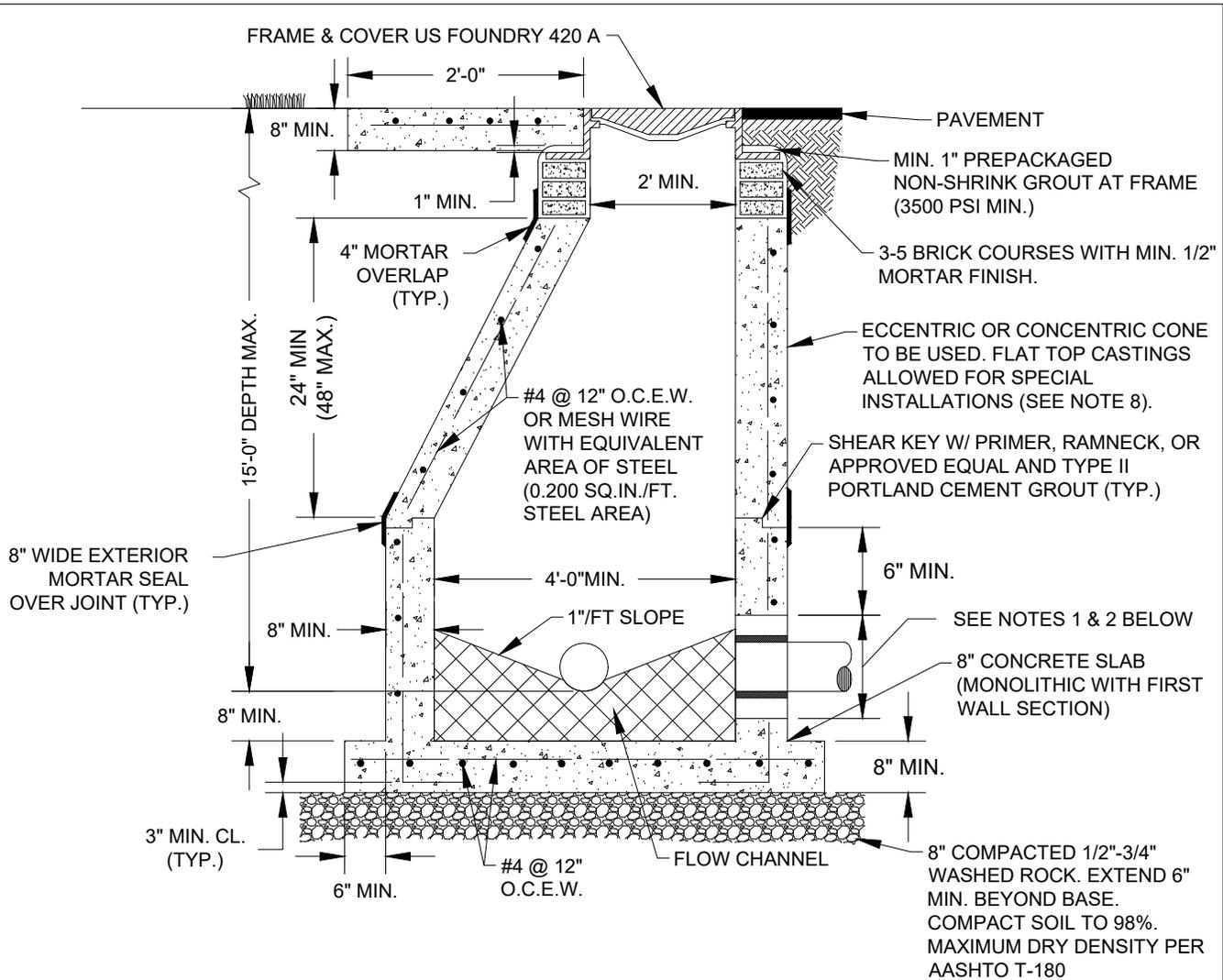
DRAWING NO.

D-12

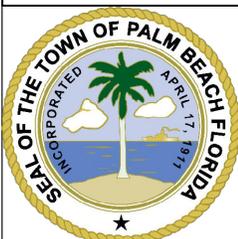
APPROVED:

EFFECTIVE:

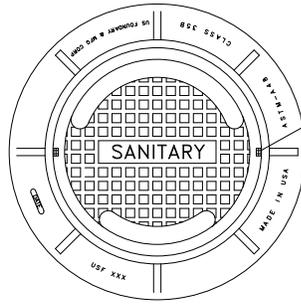
TOWN ENGINEER



1. ALL PIPE OPENINGS SHALL BE INSTALLED WITH "HARCO" PVC MANHOLE ADAPTERS OR APPROVED EQUAL FOR PVC AND DUCTILE IRON PIPE PENETRATIONS. ADAPTERS SHALL BE SEALED WITH NON-SHRINK WATERPROOF GROUT.
2. MIN. HOLE DIAMETER EQUALS OUTSIDE WALL OF PVC PIPE ADAPTER PLUS 4 INCHES.
3. GRAVITY SEWER DEPTHS SHALL NOT EXCEED 15' EXCEPT BY SPECIFIC APPROVAL OF THE ENGINEERING DIVISION. PIPE FOR SUCH INSTALLATION SHALL BE EITHER PVC C900 DR18 OR APPROVED CLASS 50 DIP.
4. MANHOLES IN GRASSED AREAS & UNFINISHED ROADWAYS SHALL HAVE A 4' x 4' x 8" OR AS OTHERWISE APPROVED BY THE ENGINEERING DIVISION, CONCRETE COLLAR WITH #4 @ 12" O.C.E.W. REINFORCEMENT.
5. COATINGS ON INTERIOR AND EXTERIOR OF MANHOLES SHALL BE KOPPERS 300M COAL TAR EPOXY OR APPROVED EQUIVALENT. A MINIMUM OF 2 COATS EACH ARE REQUIRED FOR INTERIOR AND EXTERIOR.
6. ALL PENETRATIONS, INCLUDING LIFT HOLES, SHALL BE PRE-CAST OR CORE-DRILLED AND SEALED WITH NON-SHRINKING WATERPROOF GROUT AFTER INSTALLATION.
7. DROP STRUCTURES AND FIRST MANHOLE UPSTREAM OF WETWELLS SHALL BE 5'-0" DIAMETER (MIN). PROVIDE DOUBLE LID MANHOLE COVER AND FRAME TYPE "A", US FOUNDRY NO. 690-AH-M, OR APPROVED EQUIVALENT.
8. ECCENTRIC CONES TO BE PLACED SO THAT RING AND COVER ARE ON UPSTREAM SIDE OF MANHOLE.
9. WHEN A NEW FLOW LINE DROPS MORE THAN 24" AT A MANHOLE AN INSIDE DROP MANHOLE MUST BE USED.
10. NO INFILTRATION OR EXFILTRATION FOR NEW GRAVITY SEWER MANHOLES SHALL BE ALLOWED. CHEMICAL REPAIR OF ANY LEAKS IS SPECIFICALLY NOT ALLOWED.
11. ALL MANHOLE FRAMES AND COVERS ARE TO BE FLUSH WITH PROPOSED FINISHED GRADES OF WALKS, PAVED AREAS, SWALES, ETC.
12. MANHOLE FABRICATION SHALL BE IN ACCORDANCE WITH ASTM-C478 AND CONCRETE SHALL BE TYPE II, 4000 PSI. ALL REINFORCING SHALL BE IN ACCORDANCE WITH ASTM A615 WITH SUPPLEMENT, GRADE 60.
13. MINIMUM COVER OF REINFORCING BARS IN STRUCTURE AND SLAB IS 3".



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		STANDARD SANITARY MANHOLE	DRAWING NO. S-1
REVISIONS:	DATE:		
		APPROVED:	EFFECTIVE:
		_____ TOWN ENGINEER	

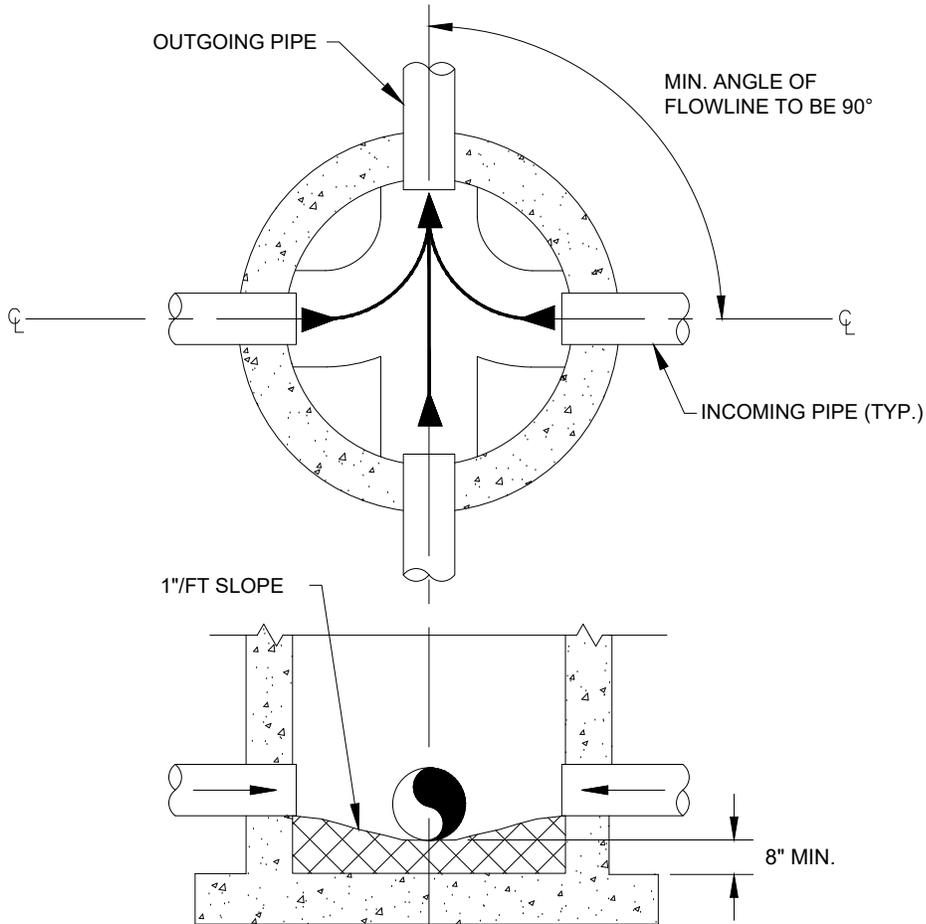


2 NON-PENETRATING PICK HOLES

1. PROVIDE U.S. FOUNDRY NO. 420-A RING OR APPROVED EQUAL STANDARD FOR 4'-0" DIAMETER MANHOLE.
2. COVER SHALL FIT FLUSH WITH THE FRAME.

MANHOLE FRAME & COVER

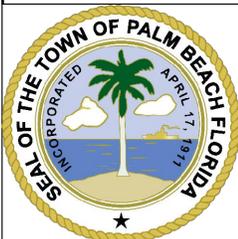
N.T.S.



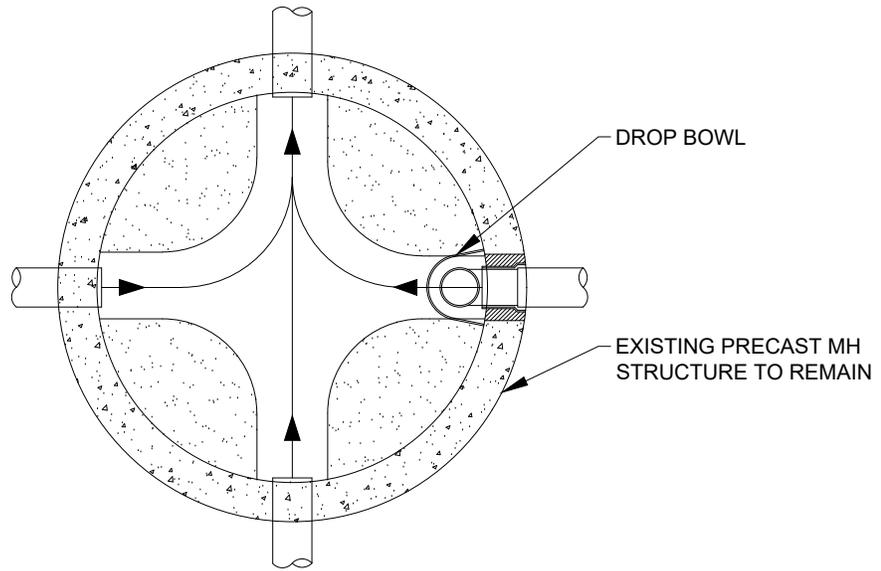
1. FLOW CHANNELS SHALL BE CONSTRUCTED WITH 6" BRICK RUBBLE, BEDDED AND COVERED WITH 2" MIN. TYPE II PORTLAND CEMENT GROUT. FLOW CHANNELS SHALL BE PROPERLY SHAPED SO AS TO PROVIDE FOR SMOOTH FLOW BETWEEN THE INFLUENT PIPE(S) AND THE EFFLUENT PIPE. SIDE WALLS OF FLOW CHANNELS SHALL BEGIN AT SPRING LINE OF PIPE OR HIGHER AND SHALL BE SLOPED TO MATCH FLOW LINE. WIDTH OF CHANNELS SHOULD MATCH THE INSIDE DIAMETER OF INCOMING AND OUTGOING PIPES.
2. RADIUS OF CHANNEL SHALL BE AS FOLLOWS:
 - PIPES LESS THAN 12": CENTERLINE RADIUS TO BE 1/2 OF MANHOLE INSIDE DIAMETER
 - PIPES 12" AND LARGER: OUTER WALL RADIUS TO BE 1/2 OF MANHOLE INSIDE DIAMETER
3. SERVICE LATERALS SHALL BE CONNECTED TO THE MAIN WHENEVER POSSIBLE. IF THIS IS NOT TECHNICALLY FEASIBLE, SERVICE LATERALS CAN BE CONNECTED TO MANHOLES ONLY WITH ENGINEERING DIVISION APPROVAL.

FLOW CHANNEL

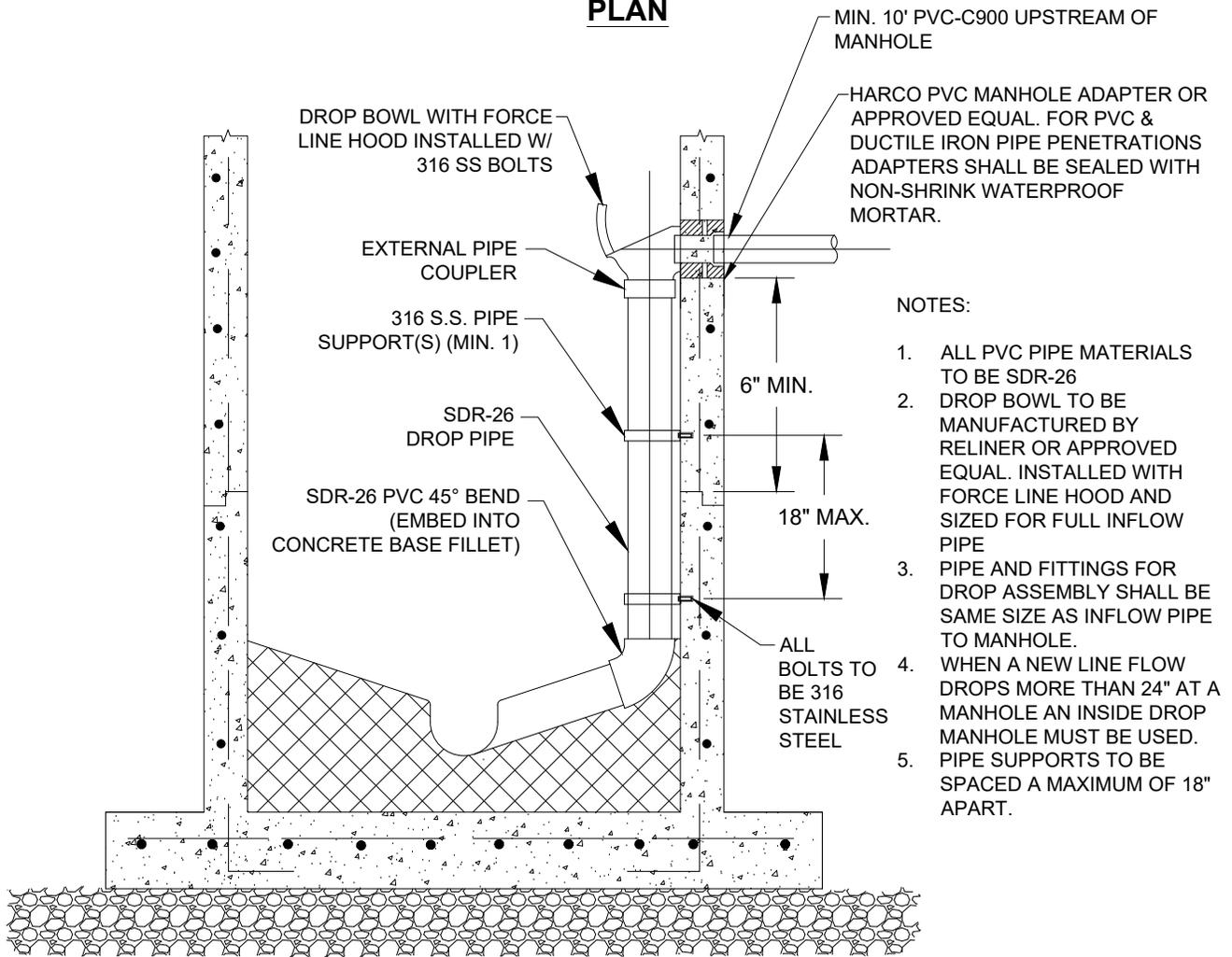
N.T.S.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		MANHOLE DETAILS	DRAWING NO. S-2
REVISIONS:	DATE:	APPROVED:	EFFECTIVE:
		TOWN ENGINEER	



PLAN



NOTES:

1. ALL PVC PIPE MATERIALS TO BE SDR-26
2. DROP BOWL TO BE MANUFACTURED BY RELINER OR APPROVED EQUAL. INSTALLED WITH FORCE LINE HOOD AND SIZED FOR FULL INFLOW PIPE
3. PIPE AND FITTINGS FOR DROP ASSEMBLY SHALL BE SAME SIZE AS INFLOW PIPE TO MANHOLE.
4. WHEN A NEW LINE FLOW DROPS MORE THAN 24" AT A MANHOLE AN INSIDE DROP MANHOLE MUST BE USED.
5. PIPE SUPPORTS TO BE SPACED A MAXIMUM OF 18" APART.

INSIDE DROP (MANHOLE)

N.T.S



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

INSIDE DROP
(MANHOLE)

DRAWING NO.
S-3

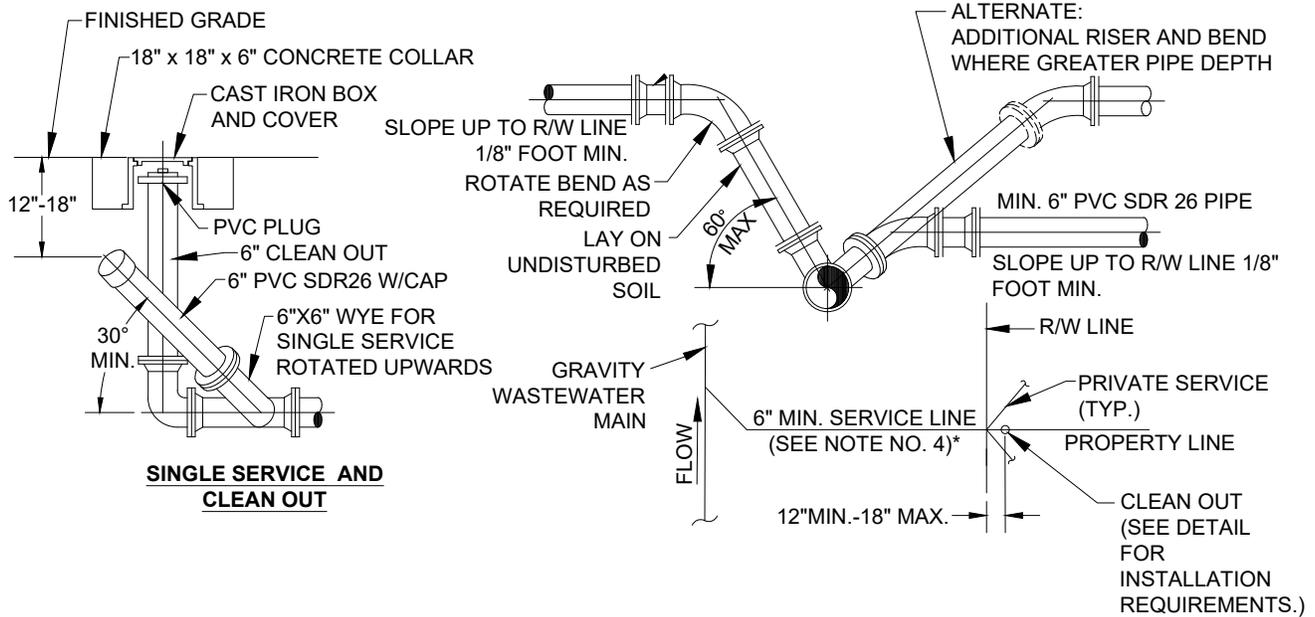
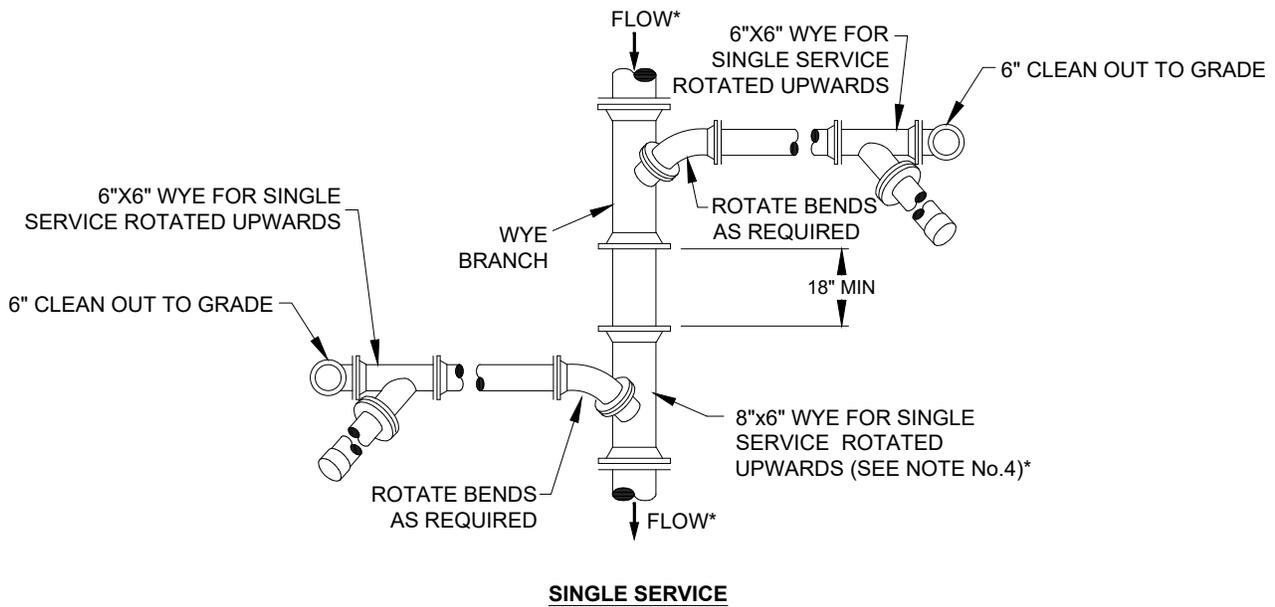
REVISIONS:

DATE:

APPROVED:

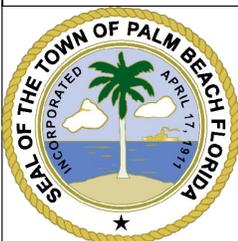
TOWN ENGINEER

EFFECTIVE:



NOTES:

1. CLEAN OUT IS TO BE INSTALLED PER TOWN STANDARDS PRIOR TO WATER METER INSTALLATION.
2. MIN. 3' HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN CLEANOUTS AND EDGE OF PAVEMENT, BACK OF CURB, EDGE OF DRIVEWAY, LIGHTPOLES, TRANSFORMERS, OR SIMILAR UTILITIES AND/OR IMPROVEMENTS.
3. ALL SEWER LATERAL CONNECTIONS TO A GRAVITY SEWER MAIN ARE REQUIRED TO BE 6" DIAMETER IN SIZE UNLESS OTHERWISE PREVIOUSLY APPROVED BY THE ENGINEERING DIVISION.*
4. DOUBLE SERVICE CONNECTIONS ARE NOT PERMITTED.



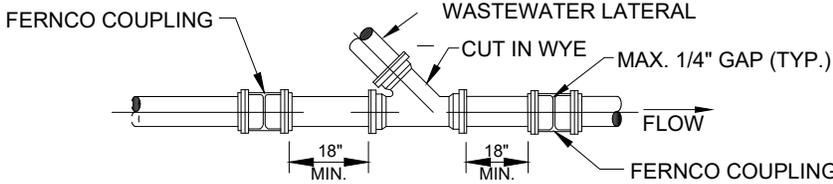
TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

TYPICAL SEWER
SERVICE
CONNECTIONS

APPROVED: _____
TOWN ENGINEER

DRAWING NO.
S-4

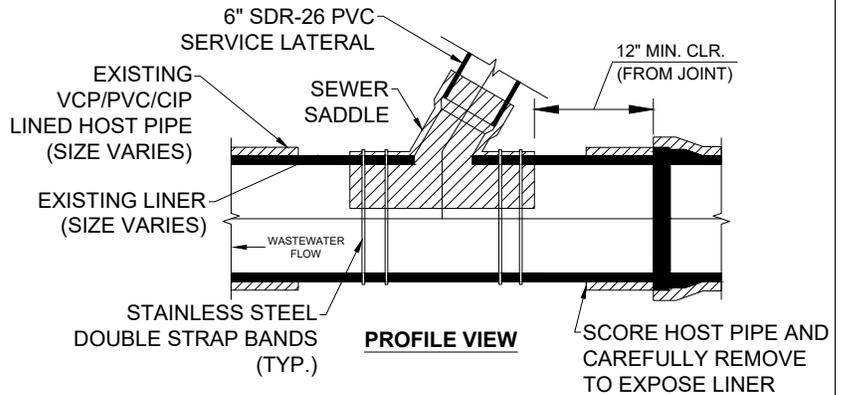
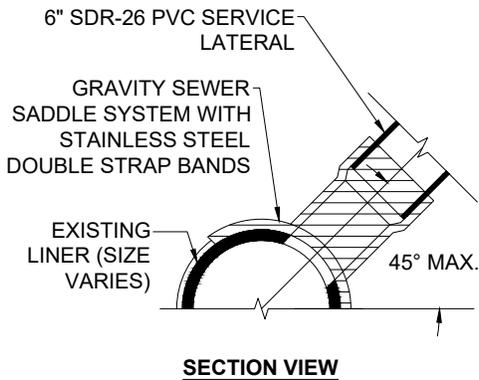
EFFECTIVE: _____



NOTES:

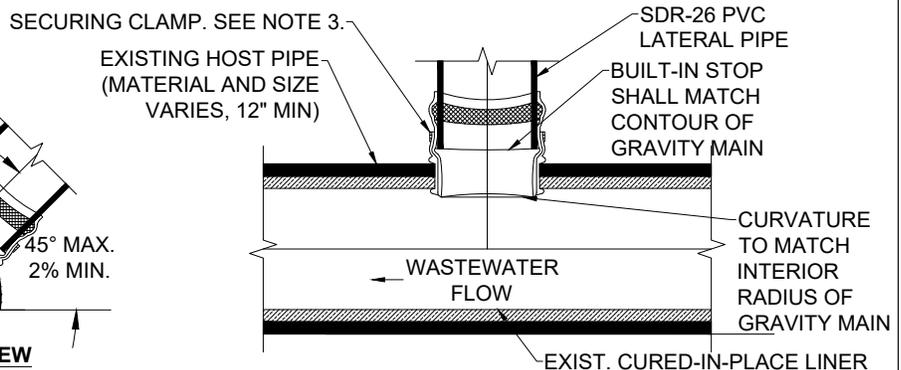
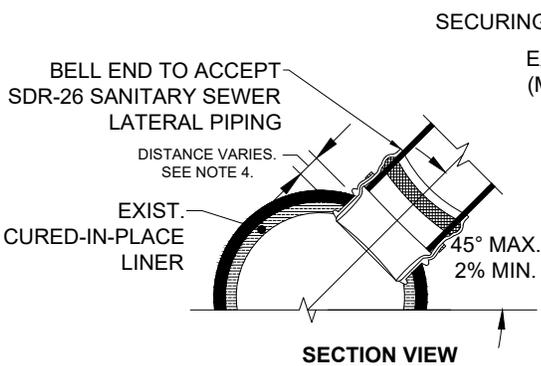
1. FOR USE ON UNLINED PIPE ONLY.
2. DUCTILE IRON FITTINGS (WYE, TEE, SLEEVES) ARE REQUIRED FOR DUCTILE IRON AND/OR C-900 PVC MAIN.

CUT-IN WYE DETAIL



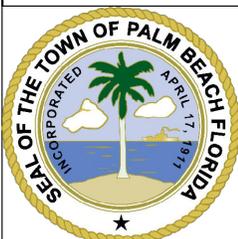
1. ALL DEBRIS SHALL BE KEPT OUT OF THE SEWER.
2. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ENGINEERING DIVISION IF PIPE IS DAMAGED PRE OR POST CONSTRUCTION. IF PRE AND/OR POST CCTV VIDEO SHOWS ANY DAMAGE TO THE PIPE, CONTRACTOR SHALL REPLACE THE DAMAGED PIPE.
3. SADDLE TEES SHALL BE FERNCO TSW-6 WITH TSPK-46 KIT OR APPROVED EQUAL AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

INSERTA - TEE DETAIL



1. INSERTA-TEE SHALL BE USED FOR LINED GRAVITY SEWER MAINS THAT ARE 12" AND LARGER ONLY.
2. THE HOST PIPE AND EXISTING LINER SHALL BE CUT AND THE SECTION SHALL BE REMOVED.
3. SECURING CLAMP HOUSING AND BAND TO BE 301 STAINLESS STEEL. SCREWS TO BE 305 STAINLESS STEEL.
4. UPPER SEGMENT AND LOWER SEGMENT TO BE SIZED PER MANUFACTURER'S SPECIFICATIONS TO INSTALL INSERTA-TEE INTO GRAVITY MAIN.
5. A PRE AND POST CCTV SHALL BE PROVIDED FOR EACH NEW LATERAL CONNECTION AND EXISTING SEWER MAIN FROM UPSTREAM AND DOWNSTREAM MANHOLE.
6. ALL DEBRIS SHALL BE KEPT OUT OF THE SEWER. THE PIPE SEGMENT CUT INTO SHALL BE CLEANED IF NECESSARY, AS DIRECTED BY THE ENGINEERING DIVISION.
7. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE ENGINEERING DIVISION IF PIPE IS DAMAGED PRE OR POST CONSTRUCTION. IF PRE AND/OR POST CCTV VIDEO SHOWS ANY DAMAGE TO THE PIPE, CONTRACTOR SHALL REPLACE THE DAMAGED PIPE AS DIRECTED BY THE ENGINEERING DIVISION.
8. INSTALL INSERTA-TEE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

SADDLE TEE DETAIL



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT		LATERAL TIE-IN DETAILS	DRAWING NO. S-5
REVISIONS:	DATE:		
		APPROVED:	EFFECTIVE:
		_____ TOWN ENGINEER	

MIN. LENGTH OF PIPE (FEET) TO BE RESTRAINED

(SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE RELEASE 3.1, AND DIPRA THRUST RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2)

FITTING TYPE		PIPE SIZE											
		4"	6"	8"	10"	12"	16"	20"	24"	30"	36"	42"	48"
90° HORIZ. BEND		14	20	25	30	35	45	54	62	73	84	93	101
45° HORIZ. BEND		6	8	11	13	15	19	22	26	30	35	38	42
22.5° HORIZ. BEND		3	4	5	6	7	9	11	12	15	17	18	20
11.25° HORIZ. BEND		1	2	3	3	4	4	5	6	7	8	9	10
90° VERT. OFFSET	UPPER BEND	29	41	53	64	74	95	115	134	160	185	207	228
	LOWER BEND	7	10	13	16	19	25	30	35	42	49	56	62
45° VERT. OFFSET	UPPER BEND	12	19	24	29	34	39	48	56	66	77	86	94
	LOWER BEND	3	4	6	7	8	10	12	15	18	20	23	26
22.5° VERT. OFFSET	UPPER BEND	6	9	12	14	17	19	23	27	32	37	41	45
	LOWER BEND	1	2	4	4	4	5	6	7	8	10	11	12
11.25° VERT. OFFSET	UPPER BEND	3	4	6	7	8	9	11	13	16	18	20	22
	LOWER BEND	1	1	1	2	2	2	3	3	4	5	5	6
PLUG (DEAD END)		32	45	59	70	83	107	129	151	160	185	207	228
IN-LINE VALVE		32	45	45	45	45	55	65	80	85	95	105	115
TEE (BRANCH RESTRAINT)	4"X Ø	23	-	-	-	-	-	-	-	-	-	-	-
	6"X Ø	21	35	-	-	-	-	-	-	-	-	-	-
	8"X Ø	18	34	47	-	-	-	-	-	-	-	-	-
	10"X Ø	16	32	46	58	-	-	-	-	-	-	-	-
	12"X Ø	13	30	44	57	69	-	-	-	-	-	-	-
	16"X Ø	7	26	41	55	67	90	-	-	-	-	-	-
	20"X Ø	1	21	38	52	65	88	109	-	-	-	-	-
	24"X Ø	1	16	34	49	62	86	108	129	-	-	-	-
	30"X Ø	1	8	28	44	58	83	106	127	154	-	-	-
	36"X Ø	1	1	22	39	54	80	103	124	153	179	-	-
	42"X Ø	1	1	15	33	49	77	100	122	151	177	201	-
	48"X Ø	1	1	7	27	44	73	97	120	149	176	200	222
REDUCER (LARGER PIPE RESTRAINT)	6"X Ø	23	-	-	-	-	-	-	-	-	-	-	-
	8"X Ø	38	25	-	-	-	-	-	-	-	-	-	-
	10"X Ø	57	43	24	-	-	-	-	-	-	-	-	-
	12"X Ø	72	60	44	41	-	-	-	-	-	-	-	-
	16"X Ø	99	90	78	75	45	-	-	-	-	-	-	-
	20"X Ø	123	116	107	105	81	45	-	-	-	-	-	-
	24"X Ø	146	140	132	131	111	82	45	-	-	-	-	-
	30"X Ø	157	153	148	141	133	113	87	56	-	-	-	-
	36"X Ø	182	179	175	169	163	147	126	101	56	-	-	-
	42"X Ø	205	202	199	194	189	175	150	138	100	54	-	-
48"X Ø	226	224	221	217	213	201	187	169	138	98	53	-	

NOTES:

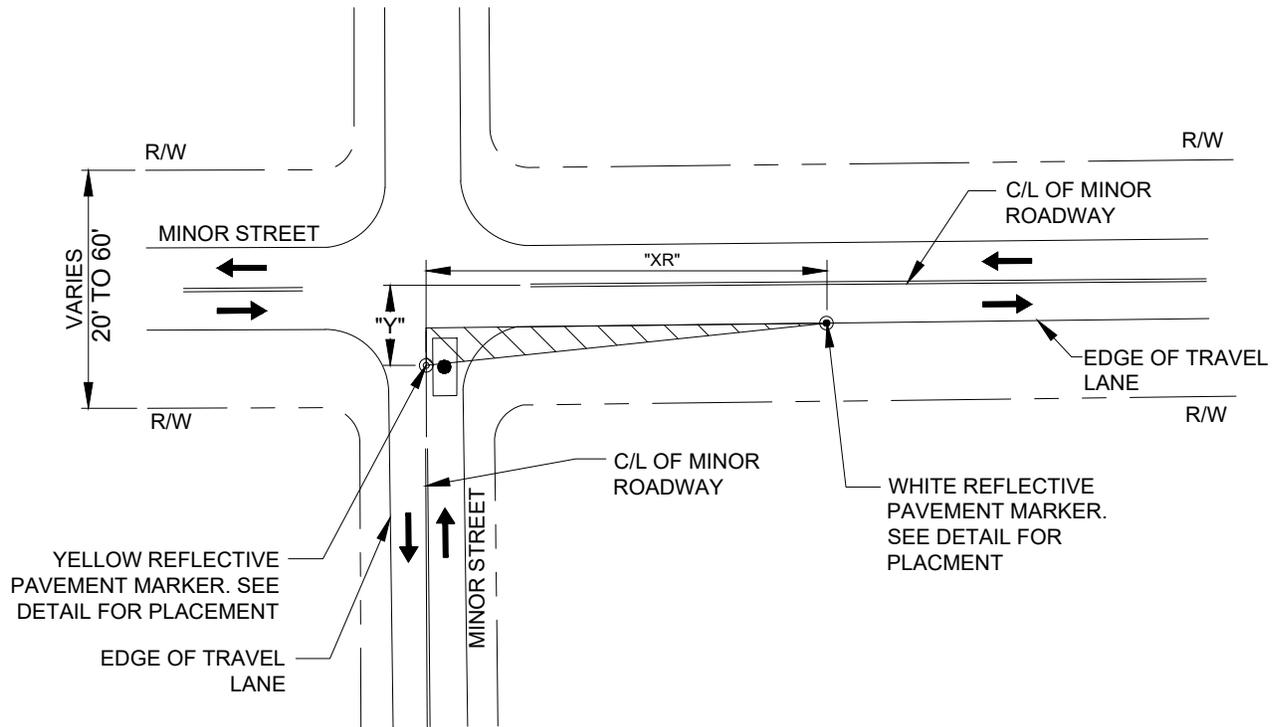
- THE DATA IN THE ABOVE TABLE ARE BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:
 SOIL TYPE-SAND TEST PRESSURE-150 PSI DEPTH OF BURY-3'
 TRENCH TYPE-3 SAFETY FACTOR- 1.5 VERTICAL OFFSET-3'
 MINIMUM PIPE LENGTH ALONG TEE RUN-5'
- THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON AND PVC PIPE.
- ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
- MULTIPLY PIPE LENGTH BY 1.4 FOR POLYETHYLENE ENCASED PIPE.
- RESTRAINED PIPE LENGTHS APPLY TO PIPE ON BOTH SIDES OF VALVES AND FITTINGS.
- RESTRAINED PIPE LENGTHS EQUAL TO AN "INLINE VALVE" CONDITION ARE REQUIRED AT EACH END OF A TRANSITION FROM HDPE PIPE TO OTHER PIPE MATERIALS.
- DESIGN ENGINEER IS RESPONSIBLE FOR PROPER RESTRAINT PIPE LENGTH SIZING FOR THE PROJECT.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

MECHANICAL THRUST RESTRAINT MINIMUM PIPE LENGTHS
APPROVED:
_____ TOWN ENGINEER

DRAWING NO. S-6
EFFECTIVE:



TYPICAL RIGHT SIGHT TRIANGLE FOR MINOR ROADWAYS

➔ = DIRECTION OF TRAVEL

STREET TYPE	25 MPH	
	XR	Y
10 FT MINOR STREET TRAVEL WAY WIDTH	67'	21.3
11 FT MINOR STREET TRAVEL WAY WIDTH	66'	22.3
12 FT MINOR STREET TRAVEL WAY WIDTH	65'	23.3

NOTES:

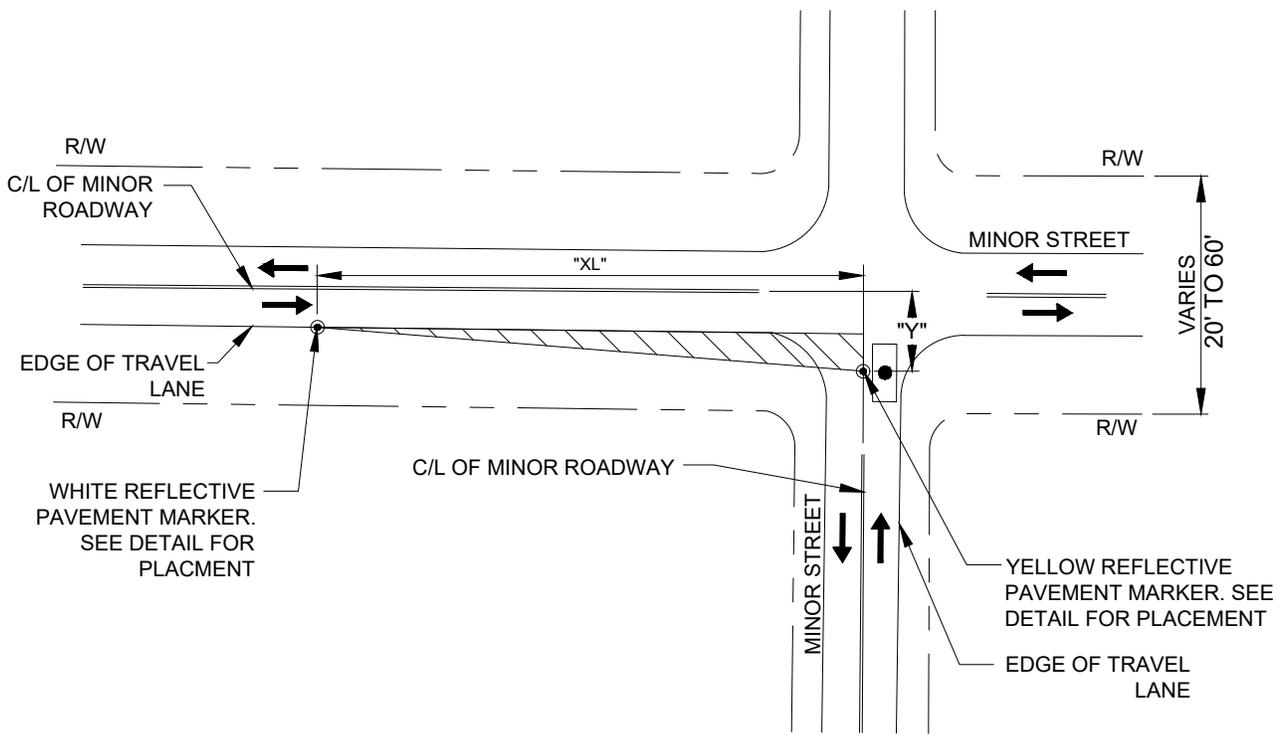
1. STREET TRAVEL WAY WIDTH IS THE TOTAL WIDTH OF THE TRAVEL LANE OR LANES IN ONE DIRECTION.
2. DISTANCE "XR" IS MEASURED FROM THE CENTERLINE OF THE SIDE STREET.
3. DISTANCE "Y" IS MEASURED FROM THE CENTERLINE OF THE MAIN STREET.
4. NO OBSTRUCTION TO VISION GREATER THAN 30 INCHES IN HEIGHT CAN BE LOCATED WITHIN THE INTERSECTION SIGHT TRIANGLE.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

INTERSECTION SIGHT TRIANGLE TYPICAL
APPROVED:
_____ TOWN ENGINEER

DRAWING NO. T-1
EFFECTIVE:



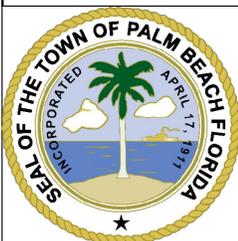
TYPICAL LEFT SIGHT TRIANGLE FOR MINOR ROADWAYS

➔ = DIRECTION OF TRAVEL

STREET TYPE	25 MPH	
	XL	Y
10 FT MINOR STREET TRAVEL WAY WIDTH	108'	21.3
11 FT MINOR STREET TRAVEL WAY WIDTH	104'	22.3
12 FT MINOR STREET TRAVEL WAY WIDTH	102'	23.3

NOTES:

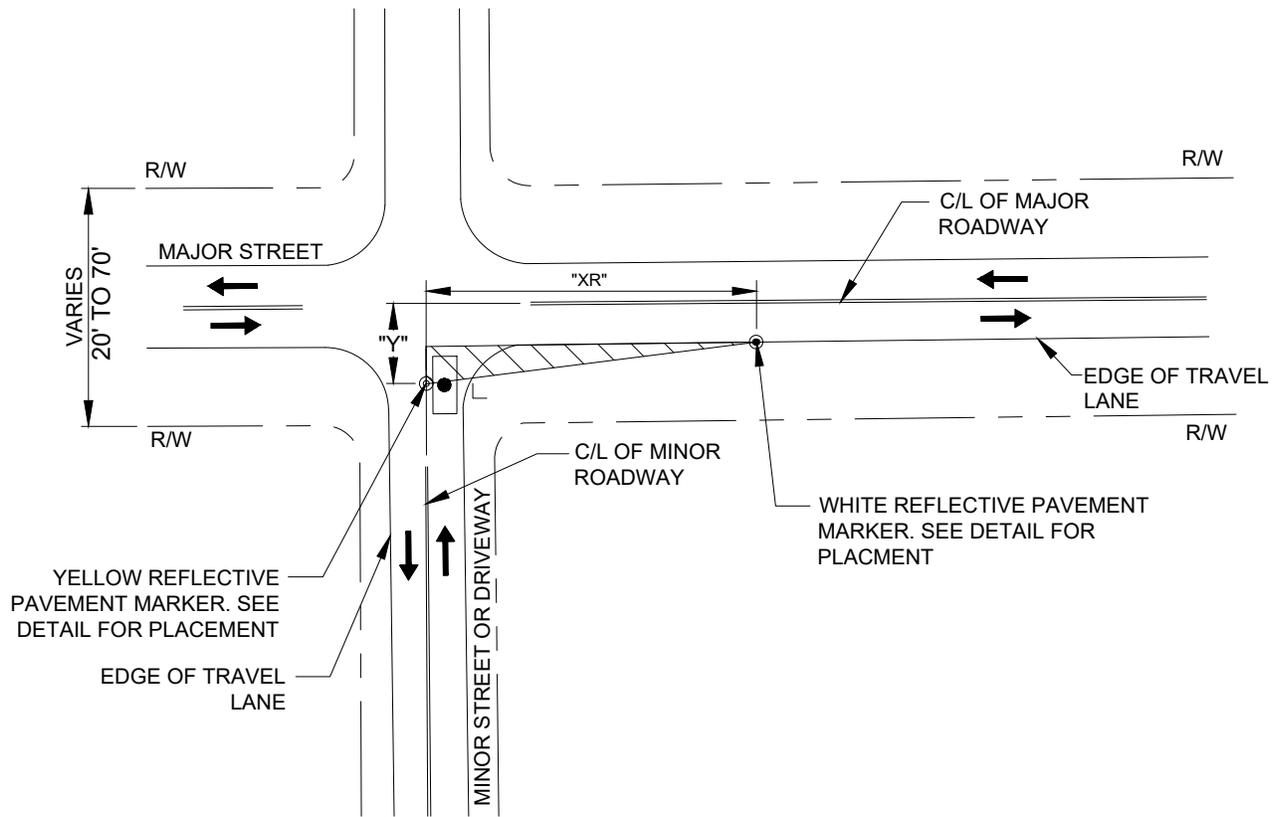
1. STREET TRAVEL WAY WIDTH IS THE TOTAL WIDTH OF THE TRAVEL LANE OR LANES IN ONE DIRECTION.
2. DISTANCE "XL" IS MEASURED FROM THE CENTERLINE OF THE SIDE STREET.
3. DISTANCE "Y" IS MEASURED FROM THE CENTERLINE OF THE MAIN STREET.
4. NO OBSTRUCTION TO VISION GREATER THAN 30 INCHES IN HEIGHT CAN BE LOCATED WITHIN THE INTERSECTION SIGHT TRIANGLE.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

INTERSECTION SIGHT TRIANGLE TYPICAL
APPROVED: TOWN ENGINEER

DRAWING NO. T-2
EFFECTIVE:



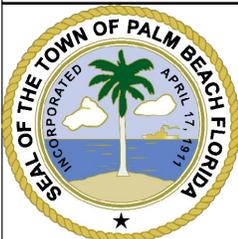
TYPICAL RIGHT SIGHT TRIANGLE FOR MAJOR ROADWAYS

➔ = DIRECTION OF TRAVEL

STREET TYPE	25 MPH		30 MPH	
	XR	Y	XR	Y
10 FT MAJOR STREET TRAVEL WAY WIDTH	75'	22.5'	90'	22.5'
11 FT MAJOR STREET TRAVEL WAY WIDTH	72'	23.5'	85'	23.5'
12 FT MAJOR STREET TRAVEL WAY WIDTH	68'	24.5'	81'	24.6'
14 FT MAJOR STREET TRAVEL WAY WIDTH	62'	26.5'	74'	26.5'
24 FT MAJOR STREET TRAVEL WAY WIDTH	60'	36.5'	71'	36.5'

NOTES:

1. STREET TRAVEL WAY WIDTH IS THE TOTAL WIDTH OF THE TRAVEL LANE OR LANES IN ONE DIRECTION.
2. DISTANCE "XR" IS MEASURED FROM THE CENTERLINE OF THE SIDE STREET.
3. DISTANCE "Y" IS MEASURED FROM THE CENTERLINE OF THE MAIN STREET.
4. NO OBSTRUCTION TO VISION GREATER THAN 30 INCHES IN HEIGHT CAN BE LOCATED WITHIN THE INTERSECTION SIGHT TRIANGLE.



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

REVISIONS: _____ DATE: _____

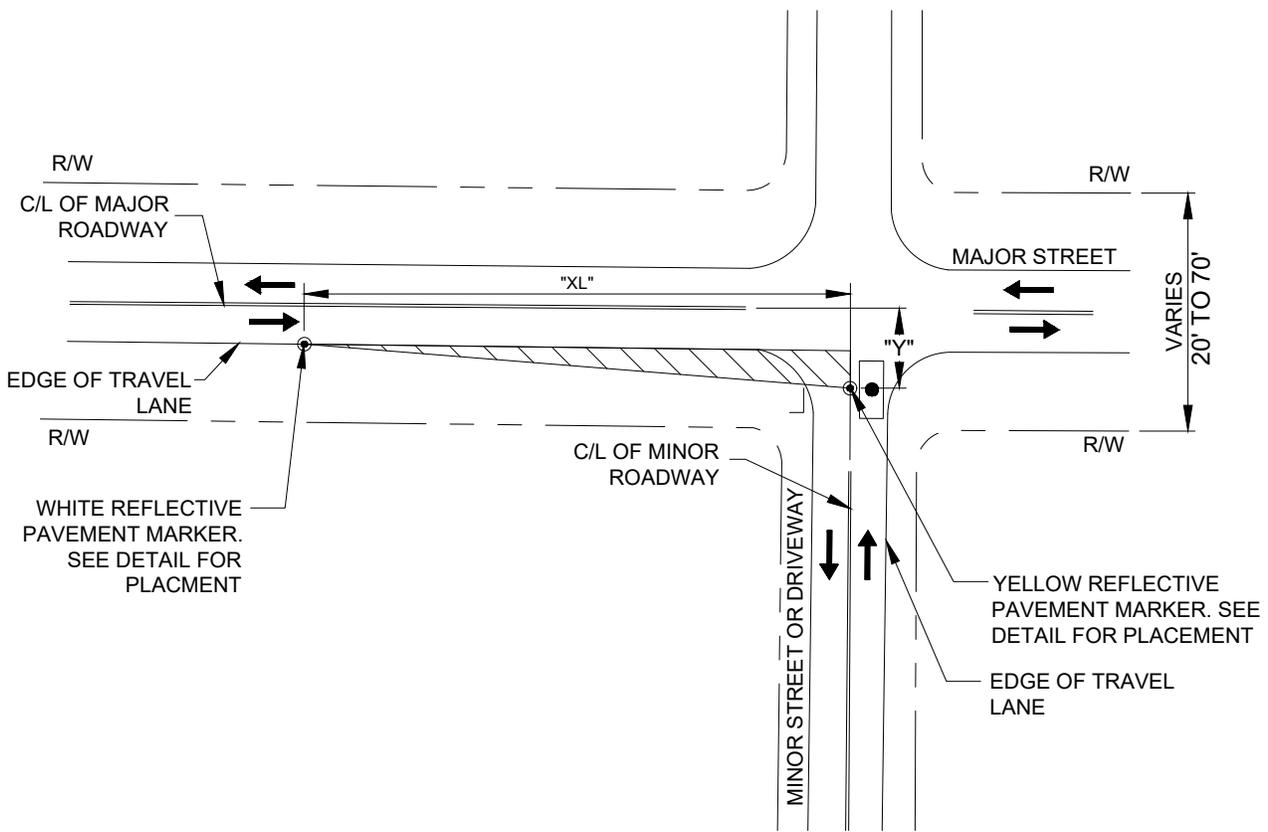
APPROVED: _____
TOWN ENGINEER

INTERSECTION SIGHT
TRIANGLE TYPICAL

APPROVED: _____
TOWN ENGINEER

DRAWING NO.
T-3

EFFECTIVE: _____



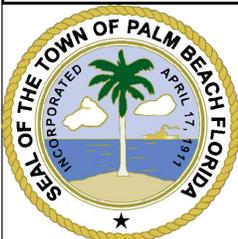
TYPICAL LEFT SIGHT TRIANGLE FOR MAJOR ROADWAYS

➔ = DIRECTION OF TRAVEL

STREET TYPE	25 MPH		30 MPH	
	XL	Y	XL	Y
10 FT MAJOR STREET TRAVEL WAY WIDTH	140'	22.5'	169'	22.5'
11 FT MAJOR STREET TRAVEL WAY WIDTH	136'	23.5'	164'	23.5'
12 FT MAJOR STREET TRAVEL WAY WIDTH	133'	24.5'	160'	24.5'
14 FT MAJOR STREET TRAVEL WAY WIDTH	126'	26.5'	152'	26.5'
24 FT MAJOR STREET TRAVEL WAY WIDTH	157'	36.5'	189'	36.5'

NOTES:

1. STREET TRAVEL WAY WIDTH IS THE TOTAL WIDTH OF THE TRAVEL LANE OR LANES IN ONE DIRECTION.
2. DISTANCE "XL" IS MEASURED FROM THE CENTERLINE OF THE SIDE STREET.
3. DISTANCE "Y" IS MEASURED FROM THE CENTERLINE OF THE MAIN STREET.
4. NO OBSTRUCTION TO VISION GREATER THAN 30 INCHES IN HEIGHT CAN BE LOCATED WITHIN THE INTERSECTION SIGHT TRIANGLE.



TOWN OF PALM BEACH PUBLIC WORKS
DEPARTMENT

REVISIONS: _____ DATE: _____

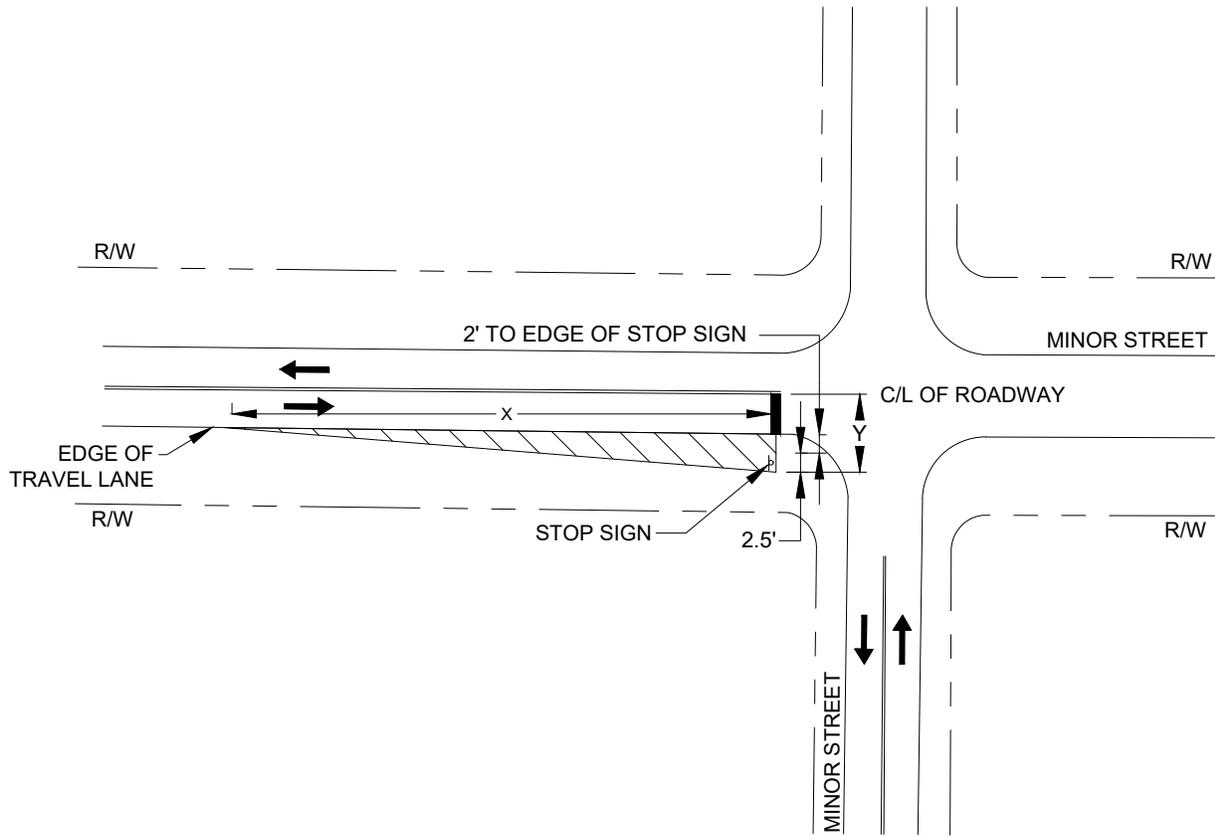
APPROVED: _____
TOWN ENGINEER

INTERSECTION SIGHT
TRIANGLE TYPICAL

APPROVED: _____
TOWN ENGINEER

DRAWING NO.
T-4

EFFECTIVE: _____



STOP SIGN CLEAR SIGHT TRIANGLE

STREET TYPE	CLEAR SIGHT TRIANGLE	
	X	Y
10 FT MINOR STREET TRAVEL WAY	48'	14.5'
11 FT MINOR STREET TRAVEL WAY	45'	15.5'
12 FT MINOR STREET TRAVEL WAY	43'	16.5'



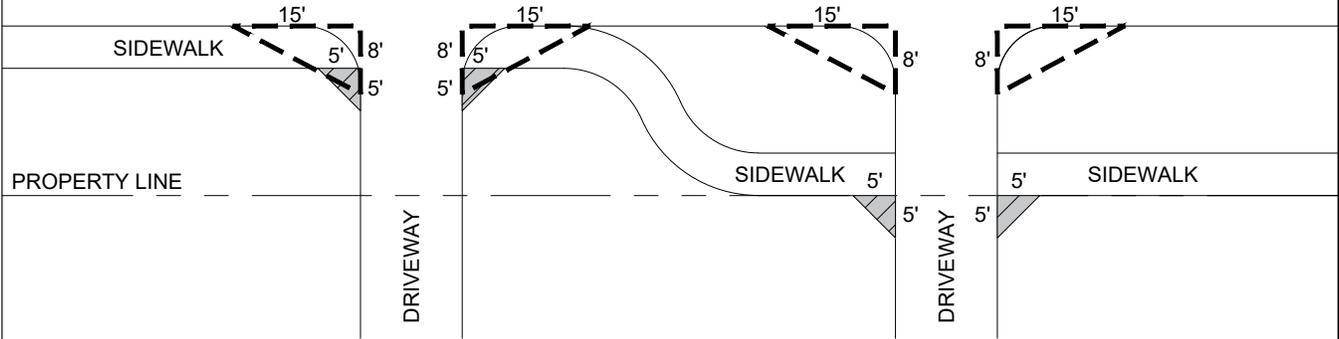
TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

STOP SIGN CLEAR SIGHT TRIANGLE
APPROVED: TOWN ENGINEER

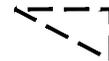
DRAWING NO. T-5
EFFECTIVE:

DRIVEWAY AND SIDEWALK CORNER CLIPS

MINOR ROAD



LEGEND:

-  15'x8' DRIVEWAY CORNER CLIP
-  5'x5' SIDEWALK CORNER CLIP

NOTE:

1. FOR DRIVEWAYS THAT CROSS SIDEWALKS AND CONNECT TO MAJOR ROADS, THE 5' X 5' SIDEWALK CORNER CLIPS APPLY AS SHOWN AND THE SIGHT TRIANGLES FOR MAJOR ROADS SHALL ALSO BE APPLIED.



TOWN OF PALM BEACH PUBLIC WORKS DEPARTMENT	
REVISIONS:	DATE:

DRIVEWAY & SIDEWALK CORNER CLIPS
APPROVED:
_____ TOWN ENGINEER

DRAWING NO. T-6
EFFECTIVE: