TOWN OF YARROW POINT

KING COUNTY **WASHINGTON**

PUBLIC WORKS STANDARDS

G&O #23445
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Gray & Osborne, Inc.
CONSULTING ENGINEERS

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CHAPTER 1

INTRODUCTION

These Public Works Standards (Standards) shall apply to all improvements within the public right-of-way and/or public easements, to all improvements required within the proposed public right-of-way or easements of new subdivisions, for all improvements intended for ownership, operations or maintenance by the Town and for all other improvements (onsite or offsite) for which the Town's Municipal Codes require approval from the Town Engineer, Town Planning Commission and/or the Town Council. These Standards are intended as guidelines for developers in preparing their plans and for the Town in reviewing plans. Where minimum values are stated, greater values should be used whenever practical; where maximum values are stated, lesser values should be used where practical. The Developer is, however, cautioned that higher standards and/or additional studies and/or environmental mitigation measures may, and will, in all likelihood, be imposed by the Town when developing on, in, near, adjacent, or tributary to sensitive mapped critical areas including, but not be limited to, steep embankments, creeks, ponds, lakes, certain wildlife habitat, unstable soils, etc.

Alternate design standards may be accepted when it can be shown, to the satisfaction of the Town Engineer, that such alternate standards will provide a design equal to or superior to that specified. In evaluating the alternate design, the Town Engineer shall consider appearance, durability, ease of maintenance, public safety and other appropriate factors. In the event the Town chooses to consider alternative designs to meet standards, the additional time and cost to review shall be borne by the Developer. Refer to Section 2.2 for more information.

Any improvements not specifically covered herein by these Standards must meet or exceed the current version of the State of Washington Department of Transportation (WSDOT) Standard Specification for Road, Bridge & Municipal Construction, current amendments thereto and the Washington State Department of Transportation Standard Plans. Said specifications shall be referred to hereafter as the "WSDOT Standard Specifications" and "WSDOT Standard Plans."

Where improvements are not covered by the WSDOT Standard Specifications, WSDOT Standard Plans, or these Town Standards, the Town Engineer will be the sole judge in establishing appropriate standards. Where these Standards conflict with any existing Town codes, ordinances or discrepancies exist within the body of this text, the higher "standards" shall be utilized as determined by the Town Engineer.

The Town will review all applications related to the Subdivision of Land (Yarrow Point Municipal Code (YPMC) Title 16), Preliminary Plat Requirements (YPMC Section 16.12), Final Plat Requirements (YPMC Section 16.24), Short Subdivisions (YPMC Section 16.28), Boundary Line Adjustments (YPMC Section 16.32), Site Development

General Provisions (YPMC Section 20.04), Erosion and Sedimentation Control Requirements (YPMC Section 20.16), and Grading and Storm Drainage Requirements (YPMC Section 20.20). The Developer shall submit the necessary information, plans, and calculations as required to meet the conditions of the various permits identified in Chapter 2 of these Standards.

A. Definitions (As used herein):

1. "Contract Documents:" The contract documents shall consist of the following and in case of conflicting provisions, the first mention shall have precedence:

    a. Developer's Agreement
    b. Town Public Works Standards
    c. Other Applicable Town Municipal Codes
    d. Town Building Permit
    e. Town Right-of-Way Use Permit
    f. Town Site Development Permit
    g. Washington State Department of Ecology (DOE) General Stormwater Construction Permit (site larger than 1 acre)
    h. Washington State Department of Transportation (WSDOT) Standard Plans
    i. WSDOT Standard Specifications
    j. SEPA Determination (as required)

    These documents shall form the Contract.

2. "Contractor:" The Developer's contractor or subcontractor.

3. "Developer:" The party having an agreement with the Town to cause the installation of certain improvements, to become a part of the Town's utility and/or roadway system upon completion and acceptance. The term shall also include the Developer's engineer(s), designer(s) and contractor(s) employed to complete the work.

4. "Development:" Any improvement within the public right-of-way and/or public easements (existing or future), improvements intended for ownership, operations or maintenance by the Town and all other improvements for which the Yarrow Point Municipal Code requires approval by the Town. These improvements include, but are not limited to, the construction, reconstruction, conversion, structural alteration, relocation, enlargement, or change in use of any structure or property, or any project that will increase vehicle trips per day or any project which negatively

impacts the service level, safety, or operational efficiency of serving roads.

5. "Driveway Entrance:" That portion of the public right-of-way used for vehicular access to private property.

6. "Maintenance Bond:" A bond furnished by the Developer and written by a corporate body qualified to write surety in the State of Washington, guaranteeing that the Developer will repair any defects found in the work within the time period as further identified herein.

7. "Mayor:" Mayor of the Town of Yarrow Point or authorized representative.

8. "Performance Bond:" A bond furnished by the Developer and written by a corporate body qualified to write surety in the State of Washington, guaranteeing that the work will be completed in accordance with the plans and specifications within a timeframe specified by the permit and guaranteed by the bond.

9. "Plans:" Drawings, including reproductions thereof, of the work to be done as an extension to the Town's utility or road network system, prepared by an Engineer licensed in the State of Washington.

10. "Project Specifications:" The specifications specific to the project as designated by an Engineer licensed in the State of Washington for the prescribed work.

11. "Town Engineer:" A representative of the Town of Yarrow Point with the duties and responsibilities described in the YPMC Section 2.16 or another qualified engineering consultant appointed by the Mayor.

12. "Town:" Town of Yarrow Point, Washington, King County, a municipal corporation, existing under and by virtue of the laws of the State of Washington. Actions designated as taken by the Town are the acts of the Council acting through the Mayor, or an approved designee.

13. "WSDOT Standard Specifications:" The most current edition of the Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge and Municipal Construction.

14. "Work:" The labor or materials or both, equipment, transportation, and other facilities necessary to complete the Contract.

B. Developer to be Informed: The Developer is expected to be fully informed regarding the nature, quality, and the extent of the work to be done, and, if in doubt, to secure specific instructions from the Town Engineer.

C. Authority of Mayor: The Mayor or his/her authorized representative shall have the authority to stop work whenever, in his/her opinion, the same shall be necessary to ensure compliance with the plans and specifications, and shall have authority to reject work and materials which do not so conform to the Standards and to decide questions which may arise in the execution of the work.

D. Authority of the Town Engineer: The Town Engineer or his/her authorized representative shall have the authority to determine the amount, quality, acceptability of the work, material and equipment, and to reject or condemn all work or material which does not conform to the terms of these Standards. The Town Engineer's decision in all matters is the decision of the Town, and can only be changed by the Mayor.

The Town has not so delegated, and the Town Engineer or his/her authorized representative(s) does (do) not purport to be a safety expert, is not so engaged in that capacity, and has neither the authority nor the responsibility to enforce construction safety laws, rules, regulations or procedures, or to order the stoppage of work for claimed violations thereof. Town inspector(s) are not responsible for the identification or enforcement of such laws, rules or regulations. The Town may at its sole discretion however, refer instances to the Washington State Department of Labor and Industries (L&I).

E. Payment for Town Services: The Developer shall be responsible for promptly reimbursing the Town for all costs and expenses incurred by the Town in the pursuit of project submittal, review, approval, and construction. These costs include, but are not limited to, the utilization of staff and "other" outside consultants as may be necessitated to adequately review and inspect construction of the project(s). All legal, administrative, and engineering fees for project review, meetings, approvals, site visits, construction inspection, etc., shall be subject to prompt reimbursement. The Developer is cautioned that project approval (Town acceptance) and occupancy permits will be denied until all bills are paid in full. Amounts for fees can be found on the Town's website.

CHAPTER 2

PERMITS

2.1 PERMIT PROCESS

No person, firm or corporation shall commence work on any facility located either in the public right-of-way or a public easement without any necessary permit(s) first having been obtained and approved by the Town.

Any party requesting a permit shall file written application with the Town and pay all fees.

Permit include, but may not be limited to:

1. Tree Removal Permit – YPMC Section 20.22;

2. Site Development Permit – YPMC Section 20.12;

3. Right-of-Way Use Permit – YPMC Section 12.04;

4. Right-of-Way Encroachment Permit – YPMC Section 12.24; and

5. Building Permit – YPMC Section 15.04.

The Town may require, at its discretion, the filing of any other information when in their opinion such information is necessary to properly enforce the provisions of these Standards.

No permit shall be issued until the proposed work has been approved by the appropriate official. Adjudication of disagreements regarding approvals shall be made by the Mayor or their designee and his/her decision shall be final.

No construction plans shall be approved nor a permit issued where it appears that the proposed work, or any part thereof, conflicts with the provisions of these Standards or any other ordinance of the Town of Yarrow Point and issuance of a permit shall not be construed as a waiver of any other portion of the Yarrow Point Municipal Code.

Permit applications may also be subject to provisions and/or recommendations issued by the King County Department of Environmental Quality, the Washington State Department of Fish and Wildlife, the Army Corp of Engineer's, and the State Department of Ecology.

2.2 DEVIATIONS

These Standards represent appropriate practice under most conditions, based on past experience in the Town and other jurisdictions. They are intended to provide facilities that are safe and appropriate for use in the Town. These Standards are not intended to limit the introduction of new ideas. Situations will arise where alternatives to these Standards may better accommodate existing conditions, overcome adverse topography or allow for more cost-effective solutions without adversely affecting safety, operations, maintenance or aesthetics. As such deviations may be approved only under special circumstances, when such deviation is warranted by unique characteristics of the site or the Developer can clearly show that a deviation will result in an equal or superior product in a cost-effective manner.

Accordingly, requests for deviations from these Standards will be considered by the Town Engineer. Such requests must be submitted in writing and include supporting information demonstrating compliance with the following criteria:

- The deviation will achieve the intended result with a comparable or superior design and quality of improvement;
- The deviation will not adversely affect safety, or operations;
- The deviation will not adversely affect maintenance and its associated cost; and
- The deviation will not adversely affect aesthetic appearance.

The need for and timing of a deviation from these Standards may not be predictable. Requests should be submitted as soon as the need becomes known. Deviations that affect engineering design, to the extent they are known, must be decided prior to submittal of construction plans. This will prevent wasted effort in the preparation of plans with non-standard features that cannot be approved. Any deviation request concerning a provision of the Uniform Fire Code requires concurrence by the Bellevue Fire Department (BFD). Documentation of concurrence by the BFD must be submitted with the request.

The Town Engineer reserves the right to approve or deny a deviation from these Standards at any time, in the interest of public health, safety and welfare. In accordance with YPMC Section 17.28, the Developer may appeal an administrative determination of the Town Engineer denying a requested deviation from these Standards to a hearing examiner appointed by the Mayor.

CHAPTER 3

PUBLIC WORKS CONSIDERATIONS

3.1 FINANCIAL GUARANTEE

Financial guarantees of the work covered under these Standards shall be in accordance with applicable provisions included in the Yarrow Point Municipal Code (YPMC).

3.2 HOLD HARMLESS CLAUSE

The Developer shall indemnify and hold harmless the Town, Town Engineer and their agents and employees, from and against all damages, losses, and expenses as specified in Chapter 12.04 and other applicable sections of the YPMC.

3.3 DEVELOPER'S PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

The Developer shall maintain all required public liability, property damage, and combined single limit as specified by the most recent Washington State Insurance Commission requirements for minimum public works projects, or as requested by the Town Engineer.

3.4 WORKERS COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE

The Developer shall maintain Workmen's Compensation Insurance or, as may be applicable, Maritime Workmen's Insurance, as required by state or federal statute for all of his employees to be engaged in work on the Project and, in case any such work is sublet, the Developer shall require the contractor or subcontractor similarly to provide Workmen's Compensation Insurance or Maritime Workmen's Insurance for all of the latter's employees to be engaged in such work.

In the event any class of employees engaged in work at the site of the Project is not covered under the Workmen's Compensation Insurance or Maritime Workmen's Insurance, as required by state and federal statute, the Developer shall maintain and shall cause each contractor or subcontractor to maintain Employer's Liability Insurance with a private insurance company for limits of at least as required by the Workers' Compensation Act of Washington and furnish satisfactory evidence of same.

3.5 NON-INTERFERENCE

The permittee shall be responsible for minimum interference with:

- Emergency Services
- Traffic Routing
- Fire Facility Clearance
- Adjoining Property
- Utility Facilities
- Natural Surface Drainage

Prior to construction, these items are to be discussed with the Town Engineer, and/or Fire and Police Departments and/or the Town Building Inspector, and special provisions may be included in any applicable Town Permit(s).

3.6 WORK STANDARDS

All work performed pursuant to a permit issued shall be done in accordance with these Public Works Standards.

The following additional standards shall be applicable when pertinent, when specifically cited in the standards or when required by state or federal funding authority:

A. A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials (AASHTO), or current edition.

B. U.S. Department of Transportation Manual on Uniform Traffic Control Devices, "MUTCD," as amended and approved by Washington State Department of Transportation, current edition.

C. Washington Station Department of Ecology, 2024 Stormwater Management Manual for Western Washington.

D. Associated Rockery Contractors (ARC), Standard Rock Wall Construction Guidelines.

E. American Society for Testing and Materials (ASTM).

F. Illuminating Engineering Society of America (IES) National Standard Practices for Roadway Lighting, RP-8, Current Edition, as modified herein.

G. WSDOT Standard Specifications for Road and Bridge Construction, to be referred to as the "Standard Specifications," current edition.

H. WSDOT Standard Plans, to be referred to as the "Standard Plans," current edition.

I. WSDOT Design Manual, current edition as amended.

J. Institute of Transportation Engineers, Traffic Engineering Handbook, current edition.

CHAPTER 4

GENERAL REQUIREMENTS

This Chapter presents information that is generally applicable to all work within the existing right-of-way or new development.

4.1 GENERAL NOTES

The General Notes shall be included on the Plans.

A. This development project shall conform to the Town of Yarrow Point's Public Works Standards. Any changes/variances/deviations from the Public Works Standards shall require approval from the Town Engineer.

B. All workmanship and materials shall conform to the "Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction" (latest edition), except where supplemented or modified by the Town's Public Works Standards. Copies of the above documents shall be available at the job site during construction.

C. Before any construction may occur, the Developer shall have plans which have been signed and approved by the Town of Yarrow Point, obtained all Town, county, state, federal, and other required permits, paid all applicable fees, and have posted all required bonds and financial guarantees.

D. A preconstruction meeting is required prior to the start of any survey staking or construction project with the Town Arborist, Town Engineer, and/or Town Building Official. Contact information for each staff member will be part of the permit package.

E. Existing utilities shown on contract plans are typically based on available records and are considered approximate. The Contractor shall be responsible for verification of all existing utility locations, whether or not these utilities are shown on the plans. The Contractor shall exercise care to avoid damage to any utility. The Contractor is cautioned that overhead utility lines may not be shown on the plans. It shall be the Contractor's responsibility to determine the true elevations and locations of all underground utilities and the extent of any hazards created by overhead utility lines. Identification, location marking, and responsibility for underground facilities or utilities are governed by provisions in Chapter 19.122 Revised Code of Washington (RCW). Prior to starting

construction, the Contractor shall call One-Call (1-800-424-5555 or 811) for utility locations (water, sanitary sewer, storm sewer, gas, power, telephone, cable television, and fiber optic).

F. Trucks over 40 feet in length are prohibited on all roads in the Town of Yarrow Point per YPMC 10.12.020. The Town Engineer may waive this requirement on a case-by-case basis.

G. Traffic Control Plans must be submitted for approval to the Town Engineer prior to the start of construction. Deviations from approved Traffic Control Plans must be obtained in writing.

H. Record drawings are required prior to project acceptance according to Section 4.10 below.

4.2 TEMPORARY TRAFFIC CONTROL

A. Interim Traffic Control: The Developer shall be responsible for temporary traffic control during construction on or along traveled streets/roads. When work is to be performed on streets that are open to traffic, the Developer shall be required to submit a traffic control plan for approval by the Town Engineer at least 48 hours prior to starting any work. Traffic control shall follow the guidelines of Section 1-07.23 of the WSDOT/APWA Standard Specifications. All barricades, signs and flagging shall conform to the requirements of the MUTCD Manual. Signs shall be legible and visible and should be removed at the end of each workday if not applicable after construction hours.

B. Temporary Road Closures and Detours: When temporary road closures cannot be avoided the Developer shall post "This Road Will Be Closed" signs a minimum of 10 days prior to the closing. The types and locations of the signs shall be shown on a detour plan. A proposal for a road closure and a detour plan must be prepared and submitted to the Town at least 20 working days in advance, and approved prior to closing any street. In addition, Developer shall notify, in writing, local fire, school, transit and law enforcement authorities, and any other affected persons as directed by the Town Engineer at least 10 days prior to closing.

C. Haul Routes: If the construction of a proposed development is determined by the Town Engineer to require special routing of large trucks or heavy construction equipment to prevent impacts to surrounding roads, residences or businesses, the Developer shall be required to develop and use an approved haul route.

When required, the haul route plan must be prepared and submitted to the Town Engineer and approved prior to beginning or continuing

construction. The haul route plan shall address routing, hours of operation, signage and flagging, and daily maintenance.

If the Developer‘s traffic fails to use the designated haul route, the Town Engineer may prohibit or limit further work on the development until such time as the requirements of the haul route are complied with.

D. Haul Road Agreement: When identified as a need by the SEPA review process or by the Town Engineer, a haul road agreement shall be obtained by the franchised utility, developer, or property owner stablishing restoration procedures to be performed upon completion of the haul operation.

4.3 CONSTRUCTION STAKING

All surveying and staking shall be performed by an engineering or surveying firm employed by the Developer and capable of performing such work. The engineer or surveyor directing and/or performing such work shall be currently licensed by the State of Washington to perform said tasks. The survey work shall be referenced to NAVD 88 vertical datum and NAD 83/91 horizontal datum.

Staking shall be determined by the Town Engineer at the preconstruction conference and in some cases, during construction. All required construction staking listed below shall be inspected by the Town prior to any construction:

A. Easement/Right-of-Way lines.
B. Easements and/or tracts.
C. Slope stake subgrade.
D. Gutter line(s)/top back of curb at a consistent offset for vertical and horizontal alignment.
E. Top of subgrade.
F. Top of gravel base.
G. Top of crushed gravel surfacing at centerline and edge of pavement every 25 feet, as required.
H. Quarter points on cul-de-sacs.
I. Centerline alignment every 25 feet (50 feet in tangent sections) with cuts and/or fills to subgrade.
J. Sensitive and Critical Areas.

The minimum staking of utility systems shall be as follows:

A. Stake centerline alignment every 25 feet with cuts and/or fills to bottom of trench.

B. Stake location of all catch basins/manholes and other fixtures for grade and alignment.

C. Stake location, size and depth of retention/detention facility.

D. Stake finished grade of catch basin/manhole rim elevation and invert elevations of all pipes in catch basins, manholes, and those that daylight.

4.4 EASEMENTS

All public utilities not within the right-of-way shall be located within an easement dedicated to the utility purveyor. Easements for utilities shall be a minimum of 20 feet wide or two times the depth of the utility, whichever is greater. Utility easements shall be graded and surfaced sufficient for maintenance access vehicles. Easements for access, as well as utilities, shall be a minimum of 25-feet wide with a minimum of 20-foot paved surface.

4.5 UTILITY TRENCH EXCAVATION

A. Clearing and grubbing, where required, shall be performed within the easement or public right-of-way as permitted by the Town. Debris resulting from the clearing and grubbing shall be disposed of by the Developer in accordance with the terms of all applicable permits.

B. For trenches located within the roadway, the asphalt or concrete shall be sawcut prior to any excavation. The sawcuts shall be full-depth and a minimum of 12 inches outside the trench width or 12 inches outside any asphalt that has cracks as a result of the trenching activities.

C. Trenches shall be excavated to the line and depth shown on the Plans to provide a minimum of 24 inches of cover over a storm pipe. Adhere to City of Bellevue Standards for minimum cover over a water main and sanitary sewer pipe. Except for unusual circumstances where approved by the Town Engineer, the trench sides shall be excavated vertically and the trench width shall be excavated only to such widths as are necessary for adequate working space and in compliance with all State and local safety requirements. The trench shall be kept free from water until joining is complete. Surface water shall be diverted so as not to enter the trench. The Developer shall maintain sufficient pumping equipment on the site to ensure that these provisions are carried out.

D. The Developer shall perform all excavation of every description and whatever substance encountered and boulders, rocks, roots and other obstructions shall be entirely removed or cut out to the width of the trench and to a depth 6 inches below storm pipe grade. Where materials are

removed from below the storm pipe grade, the trench shall be backfilled to the bottom of pipe with material satisfactory to the Town Engineer and thoroughly compacted.

E. Trenching and shoring operations shall not proceed more than 100 feet in advance of pipe laying without specific written approval of the Town Engineer , and shall be in conformance with Washington Industrial Safety and Health Administration (WISHA) and Office of Safety and Health Administration (OSHA) Safety Standard.

4.6 PIPE BEDDING

A. All utility pipes shall be bedded per the manufacture's recommendations and the details provided in these Standards.

B. The bedding course shall be finished to grade with hand tools in such a manner that the pipe will have bearing along the entire length of the barrel. The bell holes shall be excavated with hand tools to sufficient size to facilitate the construction of pipe joints.

4.7 BACKFILLING

A. Backfilling shall closely follow installation of pipe so that not more than 100 feet is left exposed during construction hours without approval of the Town Engineer. Special precautions should be provided to protect the pipe to a point 12 inches above the crown of the pipe. The remaining backfill shall be compacted to 95 percent of the maximum density in traveled areas, 90 percent outside driveway, roadways, shoulders, parking or other traveled areas. Trenches crossing existing roadways or beneath traffic bearing areas shall be backfilled and compacted with crushed surfacing material (base course or top course).

B. Due to localized conditions, the Town Engineer may approve backfilling the trench with suitable native excavated material.

C. Compaction of backfill material shall be performed in maximum 6-inch lifts, unless otherwise approved by the Town.

D. The Town Engineer may require CDF backfill for utility trenches crossing under roads based upon localized conditions and traffic loading. If CDF is used, it will be placed from 6 inches above the utility to 4 inches below the bottom of the asphalt. All excess material shall be loaded and hauled to waste.

4.8 TRENCH RESTORATION

A. Trench restoration shall be either by an asphalt patch or an asphalt patch plus a grind and asphalt overlay, as required by the Town. A grind and asphalt overlay will be required when the disturbed area is greater than 5-feet transversely (perpendicular to the roadway centerline) or 5-feet longitudinally (parallel to the roadway centerline). The grind and asphalt overlay shall extend 10 feet beyond transverse patches in each direction or the actual limits of the longitudinal patches.

B. Replacement of the asphalt pavement shall match existing pavement thickness, plus 1 inch or 3 inch minimum, whichever is greater.

C. Concrete panels, 8 to 10 inches thick, are located under 92nd Avenue NE roughly 3 inches to 6 inches below the paved surface between the thickened edge flow lines. When construction requires the removal of the concrete panels, the area may be restored with hot mix asphalt, installed to match the depth of both the pavement and concrete panels.

D. Tack coat shall be applied to the existing pavement and/or edge (face)of any sawcuts and shall be emulsified asphalt grade CSS-1. Joints shall be sealed with a material meeting Section 9-04.2 of the WSDOT Standard Specifications.

E. Hot mix asphalt (HMA) shall be placed on the prepared surface by an approved paving machine and shall be in accordance with the applicable requirements of Section 5-04 of the WSDOT Standard Specifications, except that longitudinal joints between successive layers of asphalt concrete shall be displaced laterally a minimum of 12 inches, unless otherwise approved by the Town Engineer.

F. An asphalt patch shall be extended to the edge of the roadway or thickened edge if the edge of the patch is located within 24-inches of such feature.

G. No irregular patch perimeters shall be allowed. Patches shall have a single straight edge in both the transverse (perpendicular to the roadway centerline) and longitudinal (parallel to the roadway centerline) directions.

H. If a new asphalt patch is to be made within the limits of an existing patch, the entire existing patch shall be replaced.

I. All streets, walks or driveways within the trenching areas shall be sawcut, or ground and paved to an extent that provides a smooth-riding connection and expeditious drainage flow for the newly paved surface. Feathering the

asphalt shall not be allowed and water testing is required to ensure positive drainage to the edge flow lines.

J. Surface smoothness shall be per Section 5-04.3(13) of the WSDOT Standard Specifications. The paving shall be corrected by removal and repaving of the trench only.

K. When trenching within the roadway shoulder(s), the shoulder shall be restored to its original or better condition and promote continuous water flow.

L. The final asphalt trench patch shall be completed as soon as possible, but in no instance later than 30 days after first opening the trench. This time frame may be extended by the Town Engineer only if delays are caused by inclement paving weather, utility installation schedule not under the Developer's control, or other adverse conditions.

4.9 TEMPORARY STREET PATCHING

A. Temporary patching of trenches shall be accomplished by using 2-inch Hot Mix Asphalt, 4-inch Cold Mix Asphalt, 3-inch Asphalt Treated Base, or steel plates suitable for H-20 traffic loading conditions. Steel plates shall be provided with a cold mix "lip" to accommodate a smooth transition from pavement to steel plate.

B. All temporary patches shall be marked and maintained by the Developer until such time as the permanent pavement patch is in place. All temporary patch materials shall be loaded and hauled to waste by the Developer, in compliance with applicable governmental regulations.

C. If the Developer is unable to maintain a street patch for whatever reason, the Town may elect to patch it at actual cost plus overhead and materials. The Developer will be invoiced for any Town expenses incurred to comply with this requirement.

4.10 RECORD DRAWINGS

Developers who install systems within the Town's public rights-of-way or public easements shall furnish the Town with accurate drawings, plans and profiles, showing the location and curvature of all underground structures installed, including existing facilities where encountered and abandoned installations. Horizontal locations of utilities are to be referenced to street centerlines, as marked by survey monuments, and shall be accurate to a tolerance of plus or minus 1/2 foot. The depth of such structure may be referenced to the elevation of

the finished street above said utility, with depths to the nearest 1/10 foot being shown at a minimum 50-foot interval along the location of said utility.

Such record drawings shall be submitted to the Town within 30 calendar days after completion of the work or prior to final project approval (e.g., final plat or occupancy) whichever comes first. Record drawings shall be stamped, signed and dated by an engineer currently licensed in the State of Washington.

In the event that the Developer does not have qualified personnel to furnish the record drawings required by this section, the Town Engineer shall be notified so that the necessary field measurement may be taken during construction for the preparation of record drawings. All costs of such field inspection and measurement, to include the preparation of the record drawings, shall be at the sole expense of the Developer.

Drawing Standards:

Minimum scale – 1"=20' horizontal; 1"=5' vertical
Topographic contours – 2 feet

One paper copy of the record drawings shall be submitted on full size plan sheets (22" x 34") with a signature and data, which verifies the "finished" condition of the project. Electronic files in the most recent version of AutoCAD, and in PDF format, shall also be provided to the Town.

4.11 DEVELOPER AGREEMENT REQUIREMENTS

All Developers constructing storm-drainage systems, or streets, or additions thereto, to be connected to the right-of-way, storm sewers of the Town of Yarrow Point, shall if requested, as a prerequisite to securing approval for the construction of such system, execute a Developer Agreement in a form to be provided by the Town.

4.12 ACCEPTANCE OF IMPROVEMENTS

The Town shall not accept Developer constructed improvements incrementally. All aspects of the grading, road, and utility improvements must be complete, clean, inspected, and record drawings submitted, prior to Town acceptance of improvements and release of performance sureties. Prior to acceptance, all improvements shall be in good working order, clean, and free of defects including removal of debris, vegetation, and sediment from new utilities. All dedications, easements, or other legal documentation shall be complete and recorded prior to final acceptance of the project improvements.

4.13 FINISHING AND CLEANUP

A. Before acceptance of any improvements, all pipes, ditches, catch basins, and other appurtenances shall be cleaned of all debris and foreign material. After all other work on the project is completed and before final acceptance, the entire roadway, including the shoulders, driveways, side street approaches, slopes, utility trenches, and construction areas shall be neatly finished.

B. Where all or portions of any improvements is in undeveloped areas, the entire area which has been disturbed by the construction shall be shaped so that upon completion the area will present a uniform appearance, blending into the contour of the adjacent properties. All other requirements outlined previously shall be met.

C. Upon completion, the project shall appear uniform in all respects. All graded areas shall be true to line and grade. Wherever fill material is required in the planting area, the finished grade shall be elevated to allow for final settlement, but nevertheless, the raised surface shall present a uniform appearance.

D. All rocks in excess of 1-inch diameter shall be removed from the entire construction surface area and shall be disposed of the same as required for other waste material. In no instance shall the rock be thrown onto private property. Overhang on slopes shall be removed and slopes dressed neatly so as to present a uniform, natural, well-sloped surface.

E. All excavated material at the outer lateral limits of the project shall be removed entirely. Trash of all kinds resulting from shall be removed and not placed in areas adjacent to the project. Where machine operations have broken down brush and trees beyond the lateral limits of the project, the Developer shall remove and dispose of same and restore said disturbed areas at his own expense.

F. All pavement, whether new or old, shall be thoroughly cleaned to the satisfaction of the Town Engineer.

G. Castings for manholes, valves, catch basins, monuments, vaults and other similar installations, which have been covered with the asphalt material, shall be cleaned to the satisfaction of the Town Engineer.

4.14 FINAL ACCEPTANCE

All storm sewer lines 8 inch diameter and larger shall be "videotaped" in their entirety using a remote controlled camera. A DVD of the inspection shall be provided to the Town.

CHAPTER 5

EROSION AND SEDIMENT CONTROL AND WATER POLLUTION CONTROL

The standards established by this chapter are intended to represent the minimum standards for providing erosion and sediment control and water pollution control for utility, transportation, parks, storm drainage, and site development projects. Greater or lesser requirements may be required by the Town based upon localized conditions. All projects that disturb land are responsible for preventing erosion and discharge of sediment and other pollutants into receiving waters of rights-of-way, regardless of whether a permit is required for the work.

5.1 EROSION CONTROL

In accordance with Minimum Requirement 2 of the 2024 Department of Ecology Stormwater Management Manual for Western Washington ("Manual"):

> "Projects that result in 2,000 square feet or more of new plus replaced impervious surface area, or which disturb 7,000 square feet or more of land must prepare a Construction Stormwater Pollution Prevention Plan (SWPPP) as part of the Stormwater Site Plan (see Minimum Requirement 1)."

The Construction SWPPP, also called an Erosion/Sedimentation Control (ESC) Plan shall be prepared by an engineer licensed in the state of Washington and be approved by the Town prior to the start of construction. The Town Engineer has the discretion to require additional BMPs or lessen the overall square footage of denuded areas. The detrimental effects of erosion and sedimentation shall be minimized by conforming to the following basic elements of the Construction SWPPP:

- Mark clearing limits and minimize clearing to the extent practicable to complete the work.
- Minimize sediment tracked offsite through the installation of a stabilized construction entrance.
- Control runoff flow rates through the use of sediment traps, detention tanks or vaults, dikes, pipes, swales, and/or ditches.

- Control sediment through the use of Best Management Practices (BMPs). This may include drainage swales, silt fence, vegetated strips, wattles, hay mulching, etc.

- Stabilize exposed soils through the use of mulching, plastic covering, nets, blankets, seeding and/or sodding.

- Protect slopes through surface roughening, diverting runoff away from slopes, and stabilizing the soils.

- Protect drain inlets by installing inlet protection.

- Stabilize channels and outlets.

- Control pollutants through proper materials and equipment storage, concrete handling, and equipment maintenance.

- Control dewatering accumulated in foundation areas, excavations and utility trenches in a manner that does not pollute surface waters, runoff, or cause downstream erosion or flooding.

- Maintain BMPs until approval to remove is granted by the Town Engineer.

- Manage the project through phasing, BMP maintenance and repair, and implementing the construction SWPPP.

- Protect Low Impact Development BMPs by preventing sediment from entering these BMPs.

Final stabilization (permanent vegetation and landscaping) shall be installed to prevent sediment-laden water from leaving the project site after construction is completed.

Regardless of project size or whether a permit is required, all work that disturbs the soils and exposes it to erosion shall implement erosion and sedimentation controls to prevent soil erosion and transport of sediment into the storm drainage system, natural drainage way, or lake. Never allow polluted stormwater to be discharged to the public storm drainage system.

5.2 EROSION/SEDIMENTATION CONTROL PLAN NOTES

The standard ESC Plan Notes shall be included on the ESC plans. At the applicant's discretion, notes that in no way apply to the project may be omitted; however, the remaining notes shall not be renumbered:

1. Approval of this erosion/sedimentation control (ECS) plan does not constitute an approval of permanent road or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities).

2. The implementation of the ESC plan and the construction, maintenance, replacement, and upgrading of these ESC BMPs is the responsibility of the applicant until all construction is complete and approved and vegetation/landscaping is established.

3. Clearly flag the boundaries of the clearing limits shown on this plan in the field prior to construction. During the construction period, no disturbance beyond the flagged clearing limits shall be permitted. The flagging shall be maintained by the Developer for the duration of construction.

4. Construct the ESC BMPs shown on this plan in conjunction with all clearing and grading activities, and in such a manner as to ensure that sediment and sediment laden water do not enter the drainage system, roadways, or violate applicable Ecology standards.

5. The ESC BMPs shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, upgrade these ESC BMPs as needed for unexpected storm events and to ensure that sediment and sediment-laden water do not leave the site.

6. The Developer shall inspect the ESC BMPs daily and maintain them as necessary to ensure their continued functionality. Written records shall be kept documenting the inspections.

7. Inspect and maintain the ESC BMPs on inactive sites a minimum of once a month or within the 48 hours following a major storm event (i.e., a 24-hour storm event).

8. At no time shall the sediment exceed 60-percent of the sump depth or have less than 6-inches of clearance from the sediment surface to the invert of the lowest pipe. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operations shall not flush sediment laden water into the downstream system.

9. Install stabilized construction entrances and silt fencing at the beginning of construction and maintain them for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

10. The Developer will water the site, as necessary, to reduce dust emissions as a result of construction activity.

11. The Developer shall sweep all affected public roads, as necessary, to remove mud deposited as a result of construction activity. All vehicles shall leave the site by way of the construction entrance and shall be cleaned of all dirt that would be deposited on the public streets.

12. All areas of active earthwork which have the potential for erosion and sedimentation impacts on adjacent properties, natural drainage ways, or the existing town storm drainage system must be stabilized according to the following schedule:

    a. May 1st to September 30th – soils shall be stabilized within seven days of grading.

    b. October 1st to April 30th – Earthwork activities shall be conducted in stages in order to minimize soil exposure. Soils shall be stabilized within two days.

    c. Stabilize soils at the end of the workday prior to a weekend, holiday, or predicted rain event. Seed or sod any areas to remain unworked for more than 30 days.

13. A copy of the approved ESC plan shall be on the job site whenever construction is in progress.

14. The ESC facilities shown on this plan must be constructed prior to or in conjunction with all clearing and grading activities in such a manner as to ensure that sediment-laden water does not enter the drainage system or violate applicable water standards. Wherever possible, maintain natural vegetation for silt control.

15. The applicant shall inspect the ESC BMPs daily and maintain them as necessary to ensure their continued functioning. The ESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within 48 hours following a storm event.

16. The Town Engineer has the discretion to require a state licensed Certified Erosion and Sedimentation Control Lead (CESCL) to monitor and provide

weekly compliance reports to be paid for by the Developer either as part of the permit conditions or at any time during construction if more than two written violations have occurred. If the CESCL is not provide within 3 calendar days of being requested by the Town Engineer, a stop work order will be issued until the violation is resolved.

17. Any catch basins collecting runoff from the site, whether they are on or off the site, shall be protected with a "filter fabric sock" or equivalent.

18. Do not flush concrete byproducts into the public storm drainage system. If materials such as exposed aggregate are flushed into the storm system, the Town reserves the right to require the Developer to clean the entire affected downstream storm system, and in severe cases may require him/her to relay the affected storm lines.

19. Temporary and permanent seeding (BMP C120), mulching (BMP C121), or other stabilization measures shall be provided as necessary, or as directed by the Town Engineer, to ensure sediment-laden water does not leave the site.

5.3 DETAIL DRAWINGS

The following WSDOT Standard Plans have been adopted by reference:

Standard Plan Title	Standard Plan Number
High Visibility Fence	I-10.10
Silt Fence with Backup Support	I-31.10
Silt Fence	I-30.15
High Visibility Silt Fence with Backup Support	I-30.16
High Visibility Silt Fence	I-30.17
Erosion Control at Culvert Ends	I-30.20
Wattle Installation on Slopes	I-30.30
Compost Sock	I-30.40
Erosion Control Details Coir Log Placement	I-30.60
Storm Drain Inlet Protection	I-40.20
Check Dams on Channels	I-50.20
Biodegradable Erosion Control Blanket Placement on Slopes	I-60.10
Biodegradable Erosion Control Blanket Placement for Ditches	I-60.20
Miscellaneous Erosion Control Details	I-80.10

CHAPTER 6

STORM DRAINAGE STANDARDS

6.1 GENERAL CONSIDERATIONS

Yarrow Point Municipal Code (YPMC) Section 20.04.050 adopts the Washington State Department of Ecology 2024 Stormwater Management Manual for Western Washington ("Manual"). All plans and reports regarding design and implementation of temporary erosion and sedimentation control and permanent storm drainage facilities shall follow the requirements of the Manual and information provided herein. Volume III of the Manual, Chapter 3 – Stormwater Site Plans details specific information regarding the preparation of the required documents. All reports, studies, permitting documents, and construction plans for storm drainage facilities shall be prepared by a professional engineer licensed in the State of Washington.

In addition, the design requirements identified in the 2021 King County Surface Water Design Manual, Chapter 4, shall apply with respect to storm drainage conveyance systems.

The standards established by this chapter are intended to represent the minimum standards for the design and construction of storm drainage facilities. Greater or lesser requirements may be required by the Town based on localized conditions. Storm drainage revisions, additions, modifications, or changes shall be made in compliance with Town standards, ordinances, and Best Management Practices as identified in the Manual. Adequate provisions shall be made for storm drainage, storm sewers, and associated appurtenances sufficient to convey no less than the 100-year peak design storm flow.

If warranted based on the condition and capacity of the existing storm drainage infrastructure and impacts caused by the proposed development, off-site improvements may be required, at the Town Engineer's discretion, to mitigate impacts caused by the proposed development.

6.2 STORM DRAINAGE PLAN NOTES

The Storm Drainage Notes shall be included on the storm drainage plans. At the Developer's discretion, notes that in no way apply to the project may be omitted; however, the remaining notes shall not be renumbered.

1. A copy of the approved storm drainage plans must be on the job site whenever construction is in progress.

2. Construction dewatering (groundwater) systems shall be implemented in accordance with the approved plans.

3. Issuance of a Building and/or Site Development Permit by the Town of Yarrow Point does not relieve the owner of the continuing legal obligation and/or liability connected with storm surface water disposition. Further, the Town of Yarrow Point does not accept any obligation for the proper functioning and maintenance of the system during or following construction except as outlined in the Yarrow Point Municipal Code.

4. The Developer shall be responsible for providing adequate safeguards, safety devices, protective equipment, confined space protection, flaggers, and any other needed actions to protect the life, health, and safety of the public, and to protect property in connection with the performance of work covered by the contract.

5. If conflicts between new and existing utilities arise during construction, the Developer shall notify the Town Engineer. Any changes required shall be approved by the Town Engineer prior to commencement of the work.

6. Utility castings shall not be adjusted to grade until final paving is complete.

7. Open cut road crossings for utility trenches on existing traveled roadways shall be backfilled per the Trench – Pavement Restoration Detail (RD-09). Cuts into the existing asphalt shall be neat line full-depth sawcut in a continuous line. Temporary street patching shall meet the requirements of the Public Works Standards.

8. All damages incurred to public and/or private property by the Developer during the course of construction shall be promptly repaired to the satisfaction of the Town Engineer before project approval.

9. All catch basins serving driveways and parking areas must be installed with an inverted pipe elbow for oil spill control, or an approved oil/water separator.

6.3 DESIGN STANDARDS

All pipes shall have a minimum 24 inches of cover above the crown of the pipe in the right-of-way or easements exposed to vehicular traffic. If pipe cover is less than 24 inches the pipe shall be ductile iron (Class 50) or PVC C-900. Also, any pipes proposed to be installed in the load bearing zone of structural walls shall be protected by a ductile iron (Class 50) sleeve. The design or use of DI sleeves shall be approved by the Town Engineer.

Storm drainage pipes laid 16 feet and deeper shall be cement lined, ductile iron pipe, Class 50.

6.4 STORM CONVEYANCE DESIGN

PIPE MATERIAL

1. PVC SDR 35 ASTM 3034 (Town recommended and preferred).

2. CPEP (ADS N-12 or equal).

3. Ductile Iron (Class 50).

4. PVC C-900.

PIPE SLOPE

1. Minimum slope of 0.02 ft/ft for 4-inch and 6-inch pipe.

2. Minimum slope of 0.01 ft/ft for 8-inch pipe.

3. Minimum slope of 0.005 ft/ft for 12-inch pipe and larger.

PIPE SIZE

1. The following is a list of minimum pipe diameters for a specific use in the right-of-way:

a.	Main Line and Roadway Crossing	12-inch
b.	Drainage Outlet (stub-out)	6-inch
c.	Perforated Drain Line	6-inch
d.	Rockery/Wall Drain	4-inch

2. Downstream pipe shall be the same size or larger than the connecting upstream pipe.

PIPE JOINTS

1. All pipe shall be rubber gasket push-on jointing, or better.

PIPE HORIZONTAL AND VERTICAL CLEARANCES

1. Minimum Horizontal Clearance between storm drainage, sanitary sewer, and water pipes shall be 5 feet, unless another design alternative has been specifically approved by the Town Engineer.

2. Minimum Vertical Clearance where storm drainage, sanitary sewers and water mains cross shall be 12 inches between the pipes, unless an alternative design has been specifically approved by the Town Engineer.

PIPE – GENERAL

1. Bends are not allowed on main lines or roadway crossing.

2. A catch basin is required for the following conditions:

    a. A change in the flow-line slope.
    b. At a maximum distance of 300’ in mainline.
    c. A change in the pipe size.
    d. For the joining of two or more main lines.
    e. For a drainage outlet (stub-out).
    f. A change in pipe-material.
    g. At all low-spots.

3. Tapping Tees are acceptable for side services where structures cannot be installed due to other structure conflicts, but only if a yard drain or catch basin is located within 10 feet of the property line and the design is approved by the Town Engineer.

4. All driveway culverts located within the right-of-way shall be of sufficient length to provide a minimum 3:1 slope from the edge of the driveway to the bottom of the ditch. Culverts shall have beveled end sections to match the side slope.

5. Public storm drains are to be centered in easements with a minimum width of 20 feet or two times the depth of the utility, whichever is greater.

6. Drainage outlets (stub-outs) shall be provided for each individual lot and stub-outs shall conform to the following:

    a. Each outlet shall be suitably located at the lowest elevation on the lot, so as to service all future roof downspouts, footing drains, driveways, area drains, and any other surface or subsurface drains necessary to render the lots suitable for their intended use.

b. Each outlet shall have positive, free-flowing drainage to an approved storm water conveyance system or to an approved outfall location. In the event gravity discharge is not possible, the designer may choose to pump private storm water to the nearest public catch basin in the Town owned right-of-way. Prior to pumping however, the Town Engineer requires proof that the Developer has contacted adjacent downstream property owners to fully consider gravity options. Pump systems shall:

- Be located on private property and be privately owned, operated, and maintained by the property owner;
- The pump system shall be used to convey water from one location or elevation on the property to another within the boundaries of the lot PRIOR to gravity discharge into the public storm drainage system;
- The pump systems shall be designed by a licensed engineer in the State of Washington;
- Force mains shall discharge into a private catch basin, located on private property and gravity flow to the public storm drainage system at a connection point approved by the Town. No force mains shall connect directly to the public storm drainage system;
- Force mains shall have backflow prevention valves;
- If a stormwater detention system is not required, the pump system shall have a storage facility sized to hold 25 percent of the total volume of runoff for the 2-year, 24-hour design storm;
- If a stormwater detention system is required, contingency design in the event of a system failure is required, including a safe emergency overflow path having a minimum 25 feet distance to the downstream property line;
- The Developer shall prepare an operation and maintenance plan and obtain approval from the Town prior to issuance of a permit.

Pump systems that convey water from roof drains or other surface water runoff are required to be served by duplex pump station with automatic alarm and automatic backup power facilities. Pump

systems for foundation drains or other drains that do not convey roof or surface runoff may be served by a simplex pump system without automatic alarm and automatic backup power facilities.

c. Outlets on each lot shall be located with a 5 foot high, white 2" x 4" stake marked "STORM" or "DRAIN." The stub-out shall visibly extend above surface level and be secured to the stake.

d. Pipe material shall conform to Yarrow Point standards.

e. Drainage easements are required for drainage systems designed to convey flows across more than one lot.

f. The Developer is responsible for coordinating the locations of all stub-out conveyance lines with respect to the utilities (e.g., power, gas, telephone, and cable).

g. All individual stub-outs shall be privately owned and maintained by the respective property owner.

7. Building structures shall not be permitted within 5 feet of the outside of any storm drainage pipe, or 10 feet from the top of any channel bank.

8. All building downspouts and footing drains shall be connected to the public storm drainage system, unless otherwise approved by the Town Engineer.

9. All pipes shall be tested in accordance with WSDOT standards for low pressure air test and also TV inspected. Test results shall be submitted to the town.

CATCH BASIN/INLET MATERIAL

1. Catch Basins and inlets shall be precast and conform to WSDOT Standard Plans.

2. Adjustment rings shall be precast concrete. All basins and inlets shall be installed with at least one 4-inch adjustment ring.

CATCH BASIN ALLOWABLE PIPE SIZE

1. Acceptable pipe sizes used with specific drainage structures shall conform to WSDOT Standard Plans.

CATCH BASIN SPACING

1. For grades less than 8 percent, catch basin spacing shall be a maximum of 300 feet.

2. For grades from 8 to 12 percent, catch basin spacing shall be a maximum of 200 feet.

3. For grades greater than 12 percent, catch basin spacing shall be a maximum of 150 feet.

CATCH BASIN FRAME AND GRATE

1. Vaned grates shall be used on all sloped areas of 6 percent or greater in the gutter section of a paved roadway and in sloped earth channels.

2. Herringbone grates shall be used on all sloped areas less than 6 percent and in unpaved areas when no sloped channel exists.

3. Solid lids for Type 2 catch basins shall be round traffic-bearing and marked "STORM."

4. All solid lids shall be provided with hex nuts for locking.

5. Frames, grates, rings and covers shall conform to WSDOT Standard Plans.

CATCH BASIN PIPE CONNECTIONS

1. PVC pipe connections to catch basins shall be made a heavy-duty sand collar and non-shrink grout. CPEP and DI pipe connection shall be made with non-shrink grout.

MISCELLANEOUS

1. In Town approved circumstances where paved access cannot be provided to a catch basin, the catch basin shall be installed within 50 feet of paved access and pedestrian access must be maintained, i.e., fences shall have gates, etc. If paved access cannot be provided within 50 feet of a catch basin, then the catch basin shall be channeled. In cases where a channeled catch basin is used there must be a standard catch basin with paved access at least 200 feet upstream.

2. When widening an existing street where an existing Type 1 Catch Basin will remain in the travel lane, the existing frame and grate shall be removed and replaced with a locking frame and solid cover.

6.5 DETAILS

The following WSDOT Standard Plans have been adopted by reference:

Standard Plan Title	Standard Plan Number
Catch Basin Type 1	B-5.20
Catch Basin Type 1L	B-5.40
Catch Basin Type 2	B-10.20
Concrete Inlet	B-25.60
Rectangular Frame (Reversible)	B-30.10
ADA Grates for Rectangular Frames	B-30.15
Rectangular Solid Metal Cover	B-30.20
Rectangular Vaned Grate	B-30.30
Rectangular Bi-Directional Vaned Grate	B-30.40
Rectangular Herringbone Grate	B-30.50
Grate Inlet on Catch Basin – Type 2	B-30.60
Circular Frame (Ring) and Cover	B-30.70
Circular Grate	B-30.80
Miscellaneous Details for Drainage Structures	B-30.90
Pipe Zone Bedding and Backfill	B-55.20

CHAPTER 7

STREET STANDARDS

7.1 GENERAL CONSIDERATIONS

A. General

The goal of this chapter is to encourage the uniform development of an integrated, fully accessible public transportation system that will facilitate present and future travel (vehicle and pedestrian) demand with minimal environmental impact to the community as a whole.

When new development borders two or more streets with different classifications the development shall take access off the street with the lower classification. In the event that abutting streets have the same classification the access shall be determined based upon existing and projected future traffic so as to minimize impacts on traffic flow. Access onto high volume streets may be denied in the interest of traffic safety or operational requirements.

This chapter provides minimum design standards for streets and walkways as well as minimum design standards for "stand alone" walkways.

7.2 ROADWAY NOTES

The Roadway Notes shall be included on the roadway plans. At the Developer's discretion, notes that in no way apply to the project may be omitted; however, the remaining notes shall not be renumbered.

A. A copy of the approved roadway plans shall be on site whenever construction is in progress.

B. Compaction test reports shall be submitted to the Town Engineer within 48 hours of the test. Material and testing requirements shall conform to the Town of Yarrow Points Public Works Standards Chapter 8 – Construction Control and Inspection.

C. In the case of new road construction or reconstruction requiring mailbox pagodas to be moved or rearranged, the Developer shall coordinate with the U.S. Postal Service for the temporary relocation of mailbox pagodas or construction of a new mailbox pagoda at their sole cost.

D. Roadway signage and/or pavement marking removed or damaged by the Contractor shall be restored to meet the Standards.

E. It is the responsibility of the Developer to provide adequate temporary traffic control to ensure traffic safety during construction activities. Full roadway closures are not permitted without prior approval of the Town Engineer. The Developer shall submit a traffic control plan to the Town Engineer at least 48 hours prior to starting any work in the right-of-way. All traffic control devices shall conform to the "Manual on Uniform Traffic Control Devices" (MUTCD), unless otherwise approved.

F. The maximum grade for private lanes shall be 20 percent, or 15 percent if used for fire access. For public roadways, the maximum grade shall be 15 percent.

G. Dead-end streets shall be appropriately signed per the MUTCD.

H. Sidewalk and curb and gutter, where approved, shall not be poured monolithically.

I. The Developer shall coordinate with Puget Sound Energy IntoLight for the design and installation of street lights required on all newly-created public roadways and existing roadways. All street lighting shall conform to Yarrow Point Standard Details RD-19a, RD-19b and RD-19c and shall be at the Developer's cost.

J. When an existing roadway is to receive a half-street overlay, the existing roadway shall be milled to the depth of the overlay.

K. All new street signs shall be furnished and installed by the Developer at no cost to the Town.

L. Any existing public improvements damaged during construction shall be replaced, in kind, prior to final inspection unless they represent a safety hazard in which case, they shall be repaired immediately.

M. All rockeries shall be constructed in accordance with the most current guidelines of the Association.

7.3 STREETS

Town streets are divided into three categories (Table 7-1). Collectors. Local Access and Private Lanes, in accordance with the Town's Comprehensive Plan. Function is the controlling element for classification and shall govern right-of-way, road width, and road geometrics. The Developer shall request information

on the functional classification of existing streets from the Town. New streets will be classified by the Town.

Generally speaking, the functional classification of streets is defined as follows:

- Collector streets are defined as streets that provide a route for traffic that has a destination outside of the Town.

- Local Access streets are streets that do not fit the definitions above and are not intended for travel outside of the Town. Local Access streets are to be designed to discourage through traffic.

- Private Lane is defined as a strip of land dedicated for public use which is 20 feet in width and which is intended to provide driveway access to adjacent properties. Private Lanes are only allowed under special circumstances, and are intended only to serve the properties directly abutting them.

TABLE 7-1

Street Classification for the Town of Yarrow Point

Street Type	Streets in Classification
Collector	95th Avenue NE, 92nd Avenue NE, Points Drive NE
Local Access	All roads not included above with the exception of those designated as private lanes.

TABLE 7-2

Minimum Street Design Standards

Design Standard	Collector	Local Access	Private Lane[1]
Min. Right-of-Way[2]	60 feet	40 feet	20 feet
Min. Pavement Width[2]	26 feet	20 feet	20 feet
Min./Max.[3]	0.7% - 15%	0.7% - 15%	0.7% - 20%
Edge Treatment[5]	18 inch wide Thickened Edge, both sides	18 inch wide Thickened Edge, both sides	One side if Cross Slope alley. None if "V" section.
Pedestrian Facilities	See Section 7.11	None	None
Intersection Curb Radius	25 feet	25 feet	20 feet
Design Speed	25 mph	25 mph	20 mph
Street Lighting	See Section 7.14	See Section 7.14	See Section 7.14
Utilities	See Section 7.16	See Section 7.16	See Section 7.16

(1) Private Lanes shall be approved by the Town Engineer and Fire Department.
(2) Right-of-way requirements may be increased if other factors are proposed and/or required by the Town.
(3) On-street parking will be evaluated by the Town Engineer on a case-by-case basis. All parking zones shall comply with YPMC 10.04.55.
(4) At the approval of the Town Engineer, the minimum allowable grade may be reduced to 0.5 percent to meet local conditions.
(5) Concrete curbs and gutters are limited to Point Drive NE.

The Developer is required to retain a licensed geotechnical engineer to complete soil testing and to provide engineering recommendations for design of the street sections based on "in place" soils, projected pavement loadings, roadway classification, etc.

Streets shall be placed in relationship to natural topography so that grading and filling and/or other alternations of existing condition are minimized.

7.4 STREET NAMES

The Developer shall submit proposed street names at the time the preliminary plat is submitted for review by the Town Building Official. The Town Building Official will ensure that the name assigned to a new street is consistent with policies of the Town. The Town Council shall approve all street names based on a recommendation by the Town Building Official.

An address number will be assigned to all new buildings no later than at the time the building permit is issued. It is then the Developer's responsibility to see that the house numbers are placed clearly and visibly at the main entrance to the property or at the principal place of ingress.

7.5 SIGNING

All permanent traffic control and street designation signs shall be installed within the right-of-way shall be installed by the Town. The Developer shall pay all costs for the signs and installations.

7.6 STREET FRONTAGE IMPROVEMENTS

A. Frontage improvements may be required at the Town Engineer's discretion. When applicable, all frontage improvements shall be made across the full frontage of the property. Corner lots shall provide for full frontage along both rights-of-way. Through lots shall provide for frontage on both ends of the property.

B. All frontage improvements shall provide for a smooth transition to neighboring properties and existing roadway features. Entry tapers into the new improvements shall be 5:1 and exit tapers leaving the new improvements shall be 10:1.

C. Storm drainage shall be installed as necessary to extend past the neighboring properties to prevent stormwater runoff from impacting those properties.

D. The Town encourages Developer's to install and maintain at least one permanent gravel parking space in the right-of-way adjacent to the subject property.

7.7 PRIVATE LANES

Private Lanes may be approved by the Town and fire department provided the following standards are achieved.

A. Private lanes may be approved when they are:

1. Permanently established by right-of-way, tract or easement providing legal access to each affected lot or dwelling unit and sufficient to accommodate required improvements, to include provision for future use by adjacent property owners when applicable; and

2. Constructed to the Standard Details, and

3. Accessible at all times for emergency and public service vehicle use; and

4. Not obstructing, or part of, the present or future public neighborhood circulation plan developed in processes such as the Yarrow Point Comprehensive Plan or Capital Improvement Program; and

5. Not going to result in land locking of present or future parcels; and

6. Not needed as public street to meet the minimum road spacing requirements of these Standards; and

7. Designed to serve a "maximum potential" of 7 single-family dwelling units when the entire length of the private road system to the nearest public maintained street is considered. The "maximum potential" is the number of single-family dwelling units that can be served by the private lane when physical barriers, zoning or other legal constraints are considered; and

8. Maintained by a capable and legally responsible owner or homeowners' association or other legal entity made up of all benefited property owners; and

9. Clearly described on the face of the plat, short plan, binding site plan, site development permit or other development authorization and clearly signed at street location as a private lane, for the maintenance of which the Town is not responsible.

B. The Town will not accept private lanes for maintenance as public streets until such street are brought into conformance with current Yarrow Point Municipal Code and these Standards.

C. The Town will not accept private lanes within short plats when the streets providing access to the plat are private and already have the potential to serve more than the number of lots specified in this Section. If a short plat has been proposed on a property to which the only access is over private streets, that fail to meet the standards specified in this section, shall be denied.

7.8 DEAD ENDS

Where a street is dead ended, turn around provisions must be provided where the road exceeds 150 feet in length. The maximum length of a dead end street shall be 600 feet, measured from the centerline of the intersecting street to the center of the cul-de-sac or hammerhead. The turnaround may be a cul-de-sac or

hammerhead as shown in the Standard Details. Dead end streets shall be signed per the Manual on Uniform Traffic Control Devices (MUTCD).

7.9 INTERSECTIONS AND LOW SPEED CURVES

A. Traffic control at intersections will be as specified in the Manual on Uniform Traffic Control Devices (MUTCD) or as may be specifically modified by the Town Engineer as a result of appropriate traffic engineering studies.

B. Spacing between adjacent intersecting streets shall be as follows:

When highest classification involved is:	Minimum centerline offset should be:
Collector	150 feet
Local Access and Private Lanes	125 feet

Deviations to this may be allowed at the direction of the Town Engineer.

On sloping approaches at an intersection, landings shall be provided with grade not to exceed one foot difference in elevation for a distance of 30 feet approaching any collector or 20 feet approaching a local access street, measured from nearest right-of-way line (extended) of intersecting street.

Streets shall be laid out so as to intersect as nearly as possible at right angles, and in any event, no street shall intersect with any other street at an angle of less than 85 degrees, without approval of the Town Engineer.

C. All intersections shall have an edge radius of 25 feet. Private lanes may have an edge radius of 20 feet.

D. Low speed curves shall be designed to have a minimum centerline radius of 100 feet on curves with up a 75 degree angle, and 55 feet on curves over a 75 degree angle.

7.10 SIGHT CLEARANCE

The following sight clearance requirements take into account the proportional relationship between speed and stopping distance. These requirements apply to both intersections and driveways.

The sight clearance area is a clear-view triangle formed at all intersections, including driveways, by extending two lines of specified length (A) and (B) as

detailed in the Standard Plans. The area within the triangle shall be subject to restrictions to maintain a clear view on the intersection/driveway approaches.

The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 30 inches and 10 feet above the existing surface of the street.

Sight obstructions that may be excluded from these requirements include: utility poles, regulatory signs, trees trimmed from the base to a height of 8 feet above existing surface of the street and 14 feet above the street, places where the contour of the ground is such that there can be no cross visibility at the intersection, saplings or plant species of open growth habits and not in the form of a hedge which are so planted and trimmed as to leave at all seasons a clear and unobstructed cross view.

7.11 PEDESTRIAN WALKWAYS

Per the Town's Comprehensive Plan and Yarrow Point Trails Master Plan a pedestrian walkway shall be required at the Town Engineer's discretion. Any development in this area shall be required to complete the portion of the walkway along the property frontage.

A. Walkway Width: Five feet minimum. Greater widths may be required by the Town up to 8 feet maximum.

B. Subgrade: Prepared per Section 2.06 of the WSDOT Standard Specifications.

C. All aggregate materials shall conform to the current WSDOT Standard Specifications for the type noted in the Standard Details. Greater depths may be required by the Town Engineer based on use and local ground conditions.

D. Pedestrian pathways comprised of concrete shall meet the Standard Detail RD-08a.

E. Pedestrian pathways comprised of gravel shall meet the Standard Detail RD-08b.

F. The Town may require the installation of timber edging per Standard Detail RD-17.

G. Any impacts to the existing walkway shall be repaired in-kind, joint-to-joint where applicable, per these Standards.

7.12 DRIVEWAYS

This section provides driveway standards for connections to public streets. It is not the intent of these Standards to govern design or appearance of driveways located within private property. However, fire access requirements established by the Uniform Fire Code and the Bellevue Fire Department (BFD) shall apply on private property. Existing driveway entrances may be reconstructed at their existing location, dimensions and slopes, provided the entrances do not create a hazard or impede safe operation of the street. Driveway entrances shall typically serve only one parcel. Driveway entrances serving more than one parcel shall be classified as a Private Lane. No new driveway entrances shall be constructed which does not conform to this Chapter and the minimum sight distance criteria established in Section 7.10.

Driveway Entrance Material

A. All driveway entrances shall be gravel or paved (hot mix asphalt) from the edge of street to the right-of-way line. Should the property owner elect to install a cement concrete driveway entrance in the right-of-way, it will be approved based on the following conditions:

- On Town funded projects, any impacts to existing concrete driveway entrances, the Town will be obligated to replace the driveway entrance, within the right-of-way, with gravel or hot mix asphalt. Upon completion of the Town funded project, the property owner may elect to replace the paved portion of their driveway entrance with concrete, at the property owner's sole expense.

- Maintenance of driveway entrances shall be the responsibility of the property owner.

Driveway Entrance Location

A. No driveway entrance shall extend into the road further than the edge of asphalt.

B. The angle between any driveway entrance and the street shall be not less than 45°.

C. The edges of the driveway entrance within the right-of-way shall be parallel.

D. Driveway entrances shall provide access to a garage, carport, parking area or other structure on private or public property requiring vehicle access.

E. No portion of a driveway entrance shall be allowed within 1 foot of the side property line where it intersects the right-of-way.

F. No driveway shall be located as to create a hazard to pedestrians, bicyclists or motorists or to invite or compel illegal or unsafe traffic movements.

G. Driveway edges shall be located 5 feet from existing street light, utility pole, fire hydrant or similar feature. The cost of relocating any such feature, when necessary, shall be paid by the property owner. Relocation of any street or utility feature shall require written approval of the feature's owner.

H. Any driveway entrance, which has become abandoned or is unused through a change of conditions for which it was originally intended, shall be closed. The property owner shall remove portions of the driveway entrance within the right-of-way, and replace with gravel and/or landscaping.

Driveway Entrance Size and Number

A. Width for a new driveway entrance shall be 10 feet minimum and 20 feet maximum (exclusive of the edge radius).

B. Properties with frontages 75 feet or less shall be limited to a single driveway entrance. Properties with frontages over 75 feet may request one additional driveway entrance. The Town Engineer will review requested on a case-by-case basis. There shall be no more than two entry/exit driveways to a single property.

C. The length of any driveway shall not exceed 150 feet, without approval of the Town Engineer.

Driveway Entrance Grades and Slopes

A. Driveway entrance grades shall not exceed 15 percent unless otherwise approved by the Town Engineer.

B. Driveway entrance grade transitions, excluding the tie to the street, shall be constructed as smooth vertical curves. The maximum change in driveway grade, within the right-of-way, shall be 8 percent within any 10 feet of distance on a crest and 12 percent within any 10 feet of distance in a sag vertical curve.

C. Whenever there is a potential the connecting street could be widened, the driveway entrance shall be graded to match the future widened street section.

D. Driveway entrances shall be designed with a minimum cross slope of 1 percent to ensure water does not pond on the surface.

7.13 SIDEWALK, CURBS AND GUTTERS

Cement concrete sidewalks, curbs and gutters are not allowed, with the exception of Points Drive NE.

Any modifications and/or repairs on Points Drive NE shall be completed in accordance with WSDOT Standard Specifications (Sections 8-04, 8-06, and 8-14) and WSDOT Standard Plans.

Sidewalks and/or curb ramps that are being modified and/or repaired shall be completed to meet current ADA requirements. It is the Developer's responsibility to verify current ADA requirements. Previous illumination section removed.

7.14 ROADWAY FEATURES

A. General

Miscellaneous features included herein shall be developed and constructed to encourage the uniform development and use of roadway features wherever possible.

B. Survey Monuments

1. All existing (or new) survey control monuments and/or markers which are disturbed, lost, or destroyed during construction shall be replaced with the proper monument as outlined below by a land surveyor currently registered (licensed) in the State of Washington at the expense of the responsible Developer.

2. A precast concrete monument with cast iron monument case and cover installed per Standard Details.

   If the monument case and cover are placed in cement concrete pavement, the precast base will not be necessary.

3. Monument Locations

   Appropriate monuments shall be placed:

   a. At all street intersections;

   b. At the PC and PTs of all horizontal curves;

   c. At the PI of all horizontal curves of streets where the PI lies within the limits of the traveled roadway;

   d. At all corners, control points and angle points around the perimeter of subdivisions as determined by the Town;

   e. At all section corners, quarter corners, and sixteenth corners that fall within the right-of-way.

C. Mailbox Pagodas

1. All new resident-owned mailboxes shall be installed on an existing Town-owned pagoda in accordance with the criteria found on the Town's website, https://yarrowpointwa.gov.

2. The location of all mailbox pagodas will be approved by the Town Engineer, after consulting with the local postmaster.

3. If space is unavailable on an existing pagoda to upgrade or add resident-owned mailboxes, the Developer will be required to construct a new pagoda according to current standards.

4. The local postmaster may request that multiple mailboxes be grouped together on a single pagoda. If this upgrade is a result of United States Postal Service activities or other Town project, the Town will install the new structure. If, however, this change is due to the Developer's activities he/she shall bear all associated costs.

5. A statement shall be provided on the plans indicating that the Town Engineer has reviewed and approved any new mailbox pagoda locations.

6. When it becomes necessary to remove or otherwise disturb existing mailbox pagodas to accommodate work, the pagoda may be removed, protected from damage, and temporarily installed in such a position that their function will not be impaired. After the work has been completed, the pagoda shall be reinstalled at its

original location, a new approved location, or as directed by the Town Engineer. Use only existing posts and materials, unless damaged in this process. New material needed to reinstall the pagoda shall be at the expense of the Developer.

7. Non-yielding and non-breakaway mailbox structures are not allowed in the right-of-way.

D. Rock Walls

1. Rock walls may be used for erosion protection of cut embankments up to a maximum height of 4 feet in stable soil conditions, which will result in no significant foundation settlement or outward thrust upon the walls. For heights over 4 feet or when soil is unstable, a structural wall of an acceptable design, stamped by a structural engineer currently licensed in the State of Washington, shall be used and the design shall be approved by the Town. A building permit is required for rock walls 4 feet or higher. Design and construction shall be per the Association of Rockery Contractors (ARC) Specifications and/or applicable geotechnical recommendations. The maximum height for rock walls shall be 8 feet.

2. The rock material shall comply with Section 9-13.7 of the WSDOT Standard Specifications. No stone shall be used which does not extend through the wall. The rock material shall be hard, sound, durable and free from weathered portions, seams, cracks and other defects.

3. The rock wall shall be started by excavating a trench (keyway) having a depth of 12 inches.

4. Rock selection and placement shall be such that there will be minimum voids and, in the exposed face, no open voids over 6 inches across in any direction. The final course shall have a continuous appearance and shall be placed to minimize erosion of the backfill material. The larger rocks shall be placed at the base of the rock wall so that the wall will be stable and have a stable appearance. The rocks shall be placed in a manner such that the longitudinal axis of the rock shall be at right angles or perpendicular to the rockery face. The rocks shall have all inclining faces sloping to the back of the rockery. Each course of rocks shall be seated as tightly and evenly as possible on the course beneath. After setting each course of rock, all voids between the

rocks shall be chinked on the back with quarry rock to eliminate any void sufficient to pass a 2-inch square probe.

5. The rock wall backfill shall consist of quarry spalls with a maximum size of 6 inches and a minimum size of 2 inches or as specified by a licensed engineer. This material shall be placed to a 12-inch minimum thickness between the entire wall and the cut or fill material. The backfill material shall be placed in lifts to an elevation approximately 6 inches below the top of each course of rocks as they are placed, until the uppermost course is placed. Any backfill material on the bearing surface of one rock course shall be removed before setting the next course.

6. Perforated drain pipe and filter fabric shall be installed as required by the Town.

7.15 UTILITIES

Utilities shall be furnished and installed within the right-of-way beneath new roads, or in existing roadways and rights-of-way so as to provide minimal interference with existing utilities and shall be located as generally shown in Standard Details. Where existing utilities are in place, new utilities shall conform to these Standards as nearly as practical and yet be compatible with the existing installations. Exceptions may be approved by the Town when necessary to meet special or localized requirements. Utilities shall be sized and designed to serve adjacent and tributary areas. Typically, utilities shall be required to be extended to "far" property lines. Easements shall be procured and provided by the developer to facilitate same. Utilities shall not be "land locked."

A. Other Utilities

Other utilities (gas, power, telephone, and cable TV) shall be located as follows: underground, either side of road, at plan location and depth compatible with other utilities and storm drains.

If site topography or other site conditions prevent reasonable underground installation utilities shall be on poles (as applicable) set back of ditchline, sidewalk or curb, at locations compatible with driveways, intersections, and other essential road features. To extent practical, utilities should share facilities so that a minimum of poles are needed, and preferably on only one side of road.

Notwithstanding other provisions, underground systems shall be located at least 5 feet away from road centerline and where they will not otherwise disturb existing survey monuments.

B. Utility Crossings in Existing Streets

For smaller diameter pipes and wires the crossing shall be made without surface cut of the traveled portion where the street is paved. The crossing shall be made by pushing or boring a pipe under the road. Where rock is known or expected in the area of the crossing, the attempt need not be first, open cutting will be permitted, but prior approval of the Town is required.

7.16 SUBGRADE PREPARATION

The subgrade area of the street right-of-way shall be cleared of brush, weeds, vegetation, grass and debris, per Section 2-01 of the WSDOT Standard Specifications. All cleared and grubbed material shall be satisfactorily disposed of. All depressions, or ruts, which contain water shall be drained.

The subgrade shall then be bladed to provide a uniform surface. The existing subgrade shall be compacted to a minimum of 95 percent of standard density as determined by the compaction control test. Tests shall be witnessed by the Town Engineer. Compaction tests shall be completed by the Developer at the frequency noted in Chapter 8 – Construction Control and Inspection.

7.17 CRUSHED SURFACING (BASE AND TOP COURSE)

Crushed Surfacing Base Course or Top Course shall be placed upon a subgrade properly prepared as outlined above. Crushed surfacing material shall conform to Section 9-03.9(3) of the WSDOT Standard Specifications. It shall be compacted into a dense and unyielding surface that is true to line, grade in accordance with the typical cross section. Compaction shall be a minimum of 95 percent of standard density as determined by the compaction control test for granular materials. Tests shall be witnessed by the Town Engineer. Compaction tests shall be completed by the Developer at the frequency noted in Chapter 8 – Construction Control and Inspection.

7.18 SURFACING REQUIREMENTS

All streets shall be paved with hot mix asphalt per Section 5-04 of the WSDOT Standard Specifications, with the exception of NE 47th Street, which is concrete.

See Chapter 8 – Construction Control and Inspection for material testing requirements.

7.19 STREET PATCHING AND RESTORATION

See Chapter 4 General Requirements for additional information regarding trench restoration and temporary street patching requirements.

7.20 DETAILS

The following WSDOT Standard Plans have been adopted:

Standard Plan Title	Standard Plan Number
Monument Case and Cover	A-10.30
Cement Concrete Pavement Joints	A-40.10
Cement Concrete Pavement Rehabilitation	A-60.10
Dowel Bar Retrofit for Cement Concrete Pavement	A-60.20
Cement Concrete Curb and Gutter Pan (NE Points Drive West)	F-10.16
Cement Concrete Sidewalk (NE Points Drive West)	F-30.10
Parallel Curb Ramp	F-40.12
Combination Curb Ramp	F-40.14
Perpendicular Curb Ramp	F-40.15
Single Direction Curb Ramp	F-40.16
Detectable Warning Surface	F-45.10
Cement Concrete Driveway Entrance (NE Points Drive West)	F-80.10

CHAPTER 8

CONSTRUCTION CONTROL AND INSPECTION

8.1 BASIS FOR CONTROL OF THE WORK

A. Work performed in the construction or improvement of public or private roads shall be done in accordance with these Public Works Standards and approved plans. It is emphasized that no work may be started until such plans are approved. Any revision to such plans shall be approved by the Town Engineer before being implemented.

B. The Town Engineer is authorized to enforce the Standards as well as other referenced or pertinent Specifications or guidelines. The Town Engineer will appoint a designated representative as necessary to inspect the work and they will exercise such authority as the Town Engineer may delegate.

8.2 INSPECTION

A. Generally, on all infrastructure (road and drainage facility) constructed by a Developer, control and inspection will be done by the Town Engineer. The Town Engineer shall approve any variances from the Standards during construction.

The Developer is ultimately responsible for quality control of construction and the assurance of meeting the Standards. The Town Engineer will monitor these activities with enforcement authority when requirements are not met.

All materials provided by the Developer shall be subject to inspection and approval by the Town Engineer at any time during the progress of work until final acceptance. The Developer's construction schedule shall include sufficient time for materials testing and any required verification by the Town Engineer.

The Town Engineer has the authority to reject defective material and suspend work that is being done improperly. The Town Engineer may advise the Developer of any faulty work or materials; however, failure of the Town Engineer to advise the Developer does not constitute acceptance or approval. At the Town Engineer's order, the Developer shall immediately remedy, remove, replace, or dispose of unauthorized or defective work or materials and bear all the costs of doing so.

B. All roadway and drainage infrastructures must be inspected. Subgrade inspection will not commence until density tests confirm that the compaction is in accordance with Section 8.7. Prior to any critical task being started the Developer must schedule in advance with Town Engineer. At a minimum the following critical tasks require advance notification:

1. Preconstruction Conference: 3 working days prior notice. Conference must precede the beginning of construction and include the applicant, contractor, design engineer, utilities, and other applicable participants. Plan approvals and permits must be in hand prior to the conference.

2. Clearing and Temporary Erosion/Sedimentation Control: 1 working day notice prior to initial site work involving drainage and installation of temporary erosion/sediment control.

3. Utility Installation: 1 working day notice prior to trenching and underground utility installation such as sanitary sewer, storm sewer, water, gas, power, telephone, fiber optics and TV lines.

4. Utility Backfill and Compaction: 1 working day notice before backfill and compaction of underground utility trenches.

5. Subgrade Completion: 1 working day notice at stage that underground utilities and roadway grading are complete; to include placement of gravel base if required. Inspection to include compaction tests and certifications as described in Section 8.7.

6. Curb and Sidewalk Forming: 1 working day notice to verify proper forming and preparation prior to placing concrete.

7. Curb and Sidewalk Placement: 1 working day notice to check placement of concrete.

8. Crushed Surfacing Placement: 1 working day notice to check placement and compaction of crushed surfacing base course and top course.

9. Paving: 3 working days' notice in advance of paving with hot mix asphalt.

10. Structural: 3 working days' notice prior to each critical stage such as placement of foundation piling or footings, placement and assembly of major components, and completion of structure and

approaches. Structural tests and certification requirements will be as directed by the County Road Engineer.

C. Punchlist Inspection: 15 working days prior to overall check of road or drainage project site, to include completion of paving and associated appurtenances and improvements, cleaning of drainage system, and all necessary cleanup. Prior to approval of construction work, acceptance and release of construction performance financial guarantees, the applicant/contractor shall pay any required fees, submit any required maintenance and defect financial guarantees, provide a certificate of monumentation and submit required archival quality plans, final corrected plans (as-built drawings) reflecting all minor and design plan changes of the road and drainage systems. The Town Engineer shall specify whether PDF and/or CAD files shall be submitted.

D. Final Maintenance Inspection: Prior to final approval of construction, a visual inspection of the job site will be made by the Town Engineer. Restoration of the area shall be complete with all improvements being restored to their original or superior condition. If incomplete work is noted at final inspection, the Town Engineer shall specify a timeframe within which the work must be completed. If work is not completed by the specified time, the Town may arrange for correction at the Developer's expense.

8.3 PENALTIES FOR FAILURE TO NOTIFY AND OBTAIN APPROVAL

Notification by the Developer, at the necessary time frames noted in Section 8.2, is essential for the Town to verify, through inspection, that the work meets these standards. Failure to notify and obtain approval will result in the Town requiring sampling and testing with certification by an approved private laboratory. Costs of such testing and certification shall be borne by the Developer. If the test results conclude that the unauthorized work doesn't meet the Standards, the Developer shall be required to remove the unauthorized material and replace it with materials that meet the Standards at his/her own expense. At the time that such action is directed by the Town Engineer, further work on the development may be limited or prohibited until all directed tests have been completed, approved, and all corrections identified by the Town has been made to the satisfaction of the Town Engineer.

8.4 CONTROL OF MATERIALS

A. Source of Supply and Quality of Materials: The Developer shall notify the Town Engineer of the proposed sources for all materials to be furnished. The Town Engineer shall approve the source of each of the materials

before the delivery is started. Representative preliminary samples or test data of the character and quality prescribed may be required to be submitted by the Developer for examination by the Town Engineer.

Only materials conforming to the requirements of the WSDOT/APWA Standard Specifications shall be used in the work, unless otherwise approved by the Town Engineer. Any material proposed to be used may be inspected and tested at any time during their preparation and use. If after testing it is found that sources of supply that have been approved do not furnish a uniform product, or if the product from any approved source proved unacceptable at any time, the Developer shall furnish approved materials from other approved sources. Any approved material that becomes unfit shall not be used.

B. Samples and Tests: At the direction of the Town Engineer, the Developer shall employ a certified testing laboratory to conduct necessary field and/or lab tests of materials or methods. All testing shall be in accordance with WSDOT, ASTM and/or AASHTO standards. The Developer shall furnish samples of all materials as requested by the Town Engineer. Materials shall not be used until approved.

The testing laboratory and Inspector should be present during all field tests. Regardless, the Town Engineer shall be furnished certified copies of the complete test reports directly from the testing laboratory.

8.5 CONSTRUCTION CONTROL IN DEVELOPMENTS

The provisions of Section 2-03 of the WSDOT/APWA Standard Specifications apply in all respects to development construction unless otherwise instructed by the Town Engineer. The following elements are mentioned for clarification and emphasis:

A. Embankment and Cut Section Compaction: Each layer of the entire embankment shall be compacted to 95 percent of the maximum density as determined by the compaction control tests described in Section 2-03.3(14)D of the WSDOT/APWA Standard Specifications – Method C. In the top two-feet, horizontal layers shall not exceed four-inches in depth before compaction. No layer below the top two-feet shall exceed eight-inches in depth before compaction. The Contractor shall use compacting equipment approved by the Engineer. Any embankment inaccessible to large compacting equipment shall be compacted with small mechanical or vibratory compactors. Controlled Density Fill shall be used in areas that are difficult to reach with any equipment. The moisture content of the material shall not vary more than 3 percent above or below optimum determined by the tests described in Section 2-03.3(14)D.

B. Testing for In-Place Density and Moisture Content

a. Prior to placing any surfacing material on the roadway, it will be the responsibility of the Developer to provide density test reports reviewed and approved by a professional engineer and accepted by the Town Engineer. Optimum moisture content, maximum density, in-place density and moisture content shall be determined by methods cited in Section 2-03.3(14) D of WSDOT/APWA Standard Specifications or by other test procedures approved by the Town Engineer. For work to be accepted, tests must show consistent uniform density and moisture content as required by tests referenced above.

C. Material Testing and Reports: Testing shall be required at the Developer's expense. The testing shall be ordered by the Developer and the chosen testing lab shall be accredited for performing the various testing methods either by AASHTO R18, AASHTO 150/IEC 17025, or the American Association for Laboratory Accreditation and further approved by the Town. Testing shall be done on all materials and construction as specified in the Standard Specifications and with frequency as specified herein. Testing reports shall include a sketch showing the locations the tests were taken. Compaction testing shall be accomplished as backfill or embankment construction progresses. At a minimum, compaction tests are required at the following locations. Additional tests and/or shorter intervals may be required by the Town Engineer.

D. Unsuitable Foundation Excavation: The Developer shall excavate unstable natural ground before building any embankment over it. This unstable material may include peat, muck, swampland, buried logs and stumps, or other material not fit for a base. If unsuitable material is encountered, the Developer shall immediately contact the Town Engineer. No fill, backfill or permanent parts of a structure shall progress until authorized by the Town Engineer. Corrective actions may include, but are not limited to, over excavation, dewatering and/or development and approval of a special design section. The Developer shall excavate such material to the boundaries set by the Town Engineer.

8.6 MATERIAL TESTING AND ACCEPTANCE

Testing shall be required at the Developer's expense. The testing shall be ordered by the Developer and the chosen testing lab shall be accredited for performing the various testing methods either by AASHTO R18, AASHTO 150/IEC 17025, or the American Association for Laboratory Accreditation and further approved by

the Town. Testing shall be done on all materials and construction as specified in the Standard Specifications and with frequency as specified herein.

TESTING AND SAMPLING FREQUENCY GUIDE

Earthwork

Item	Location	Test	Testing Frequency
Undisturbed Native Soil	Structures	In Place Density[3]	Two random tests in building footings and two tests on subgrade within building line.
		Moisture Density Relationship (Modified Proctor)	One test and any time material type changes.
Fills and Backfills	Structures (adjacent to)	In Place Density[3]	One test per structure Backfills per 2,000 sq. ft. taken 12 inches below finished Grade.
		Moisture Density Relationship (Modified Proctor)	One test and any time material type changes.
Subgrades	Site	In Place Density[3]	One test per lift per 2,500 sq. ft.
		Moisture Density Relationship (Modified Proctor)	One test and any time material type changes.
Embankments or Borrow	Any	In Place Density[3]	One test per lift per 500 cubic yards placed.

Trenching

Item	Test	Testing Frequency
Pipe Bedding	Gradation[1]	One for each material source.
Trench Backfill	Gradation[1]	One for each material source.
	In-Place Density[1][2][3][4]	One every 100 feet of trench and every 2 feet in depth of backfill material.
	Moisture Density Relationship (Modified Proctor)	One prior to start of backfilling operations, one every 20 densities and any time material type changes.

Aggregate Materials

Item	Test	Testing Frequency
Crushed Surfacing Base Course	Gradation, SE and Fracture	1 – 2,000 TN.
	In-Place Density(1)	One test on every lift on material placed at a frequency of 250 square yards of completed area.
Crushed Surfacing Top Course	Gradation, SE and Fracture	1 – 2,000 TN.
	In-Place Density(1)	One test on every lift on material placed at a frequency of 250 square yards of completed area.

Hot Mix Asphalt and Asphalt Treated Base

Item	Test	Testing Frequency
Commercial HMA and ATB	Rice Density	1 – project.
HMA Cl. ___ PG ___ Project Quantity ≤ 400 tons	Rice Density	1 – project.
HMA Cl. ___ PG ___ Project Quantity > 400 tons ≤ 800 tons	Rice Density, Gradation and Asphalt Content	1 – project.
HMA Cl. ___ PG ___ Project Quantity > 800 tons	Rice Density, Gradation and Asphalt Content	1 – 800 TN.(5)
Commercial HMA, HMA Cl. ___ PG ____, ATB	Compaction(1)	1 – 80 TN.

Hot Mix Asphalt Aggregate(9)

Item	Test	Testing Frequency
Aggregate	SE, Fracture	1 – 1,600 TN.
Blend Sand	SE	1 – Project.
Mineral Filler	Sp. G and Pl	Certificate.

PCC Paving[8]

Item	Test	Testing Frequency
Course Aggregate[7]	Gradation	1 – 1,000 CY.
Fine Aggregate[7]	Gradation	1 – 1,000 CY.
Combined Aggregate[7]	Gradation	1 – 1,000 CY.
Air Content	Air	1 – 500 CY.
Cylinders (28 Day)	Compressive Strength	1 – 500 CY.
Core	Density Thickness	1 – 500 CY. 1 – 500 CY.
Cement[6]	Chemical and Physical Certification	

PCC Structures[8]

Item	Test	Testing Frequency
Course Aggregate[7]	Gradation	1 – 1,000 CY.
Fine Aggregate[7]	Gradation	1 – 1,000 CY.
Combined Aggregate[7]	Gradation	1 – 1,000 CY.
Consistency	Slump	1 – 50 CY.
Air Content	Air	1 – 50 CY.
Cylinders (28 Day)	Compressive Strength	1 – 50 CY.
Cement[6]	Chemical and Physical Certification	
Grout	Compressive Strength	1 set/day.

(1) All acceptance tests shall be conducted from in-place samples.

(2) Additional tests shall be conducted when variations occur due to the Contractor's operations, weather conditions, site conditions, etc.

(3) All compaction shall be in accordance with the Compaction Control Test of Section 2-03.3(14)D. The nuclear densometer, if properly calibrated, may be used for the required testing frequency and procedures. The densometer shall be calibrated and is recommended for use when the time for complete results becomes critical.

(4) Depending on soil conditions, it is anticipated that compaction tests will be required at depths of two feet above the pipe and at each additional two feet to the existing surface plus a test at the surface.

(5) A minimum of three samples, on a random basis, shall be taken and tested.

(6) Cement may be accepted by the Engineer based on the Manufacturer's Mill Test Report number indicating full conformance to the Specification.

(7) The frequency for fine, course, and combined concrete aggregate samples for PCC Paving and PCC Structures shall be based on the cubic yard (CY) of concrete.

(8) Commercial concrete will be accepted with Certificate of Compliance; no testing is required.

(9) Hot mix asphalt batch mix verification is required.

In cases where tests or frequency of testing do not meet the minimum standard, corrective action shall be taken as directed by the Developer and approved by the Town Engineer. Retests shall show passing densities prior to placing the next lift of fill.

8.7 SUBGRADE

In preparing the roadbed for surfacing before any paving, the requirements outlined in Sections 2-06.3(1) and 2-06.3(2) of the WSDOT/APWA Specifications shall be met. After the subgrade preparation has been completed, it shall be thoroughly checked by the Developer using a level, string line, crown board, or other means to determine that the subgrade conforms to the approved Plans and the Standards prior to placing any surfacing material.

8.8 COUNTY FORCES AND COUNTY CONTRACT ROAD INSPECTION

Road construction performed through Interlocal Agreement with King County Road forces will be inspected under the supervision of the King County Road Engineer.

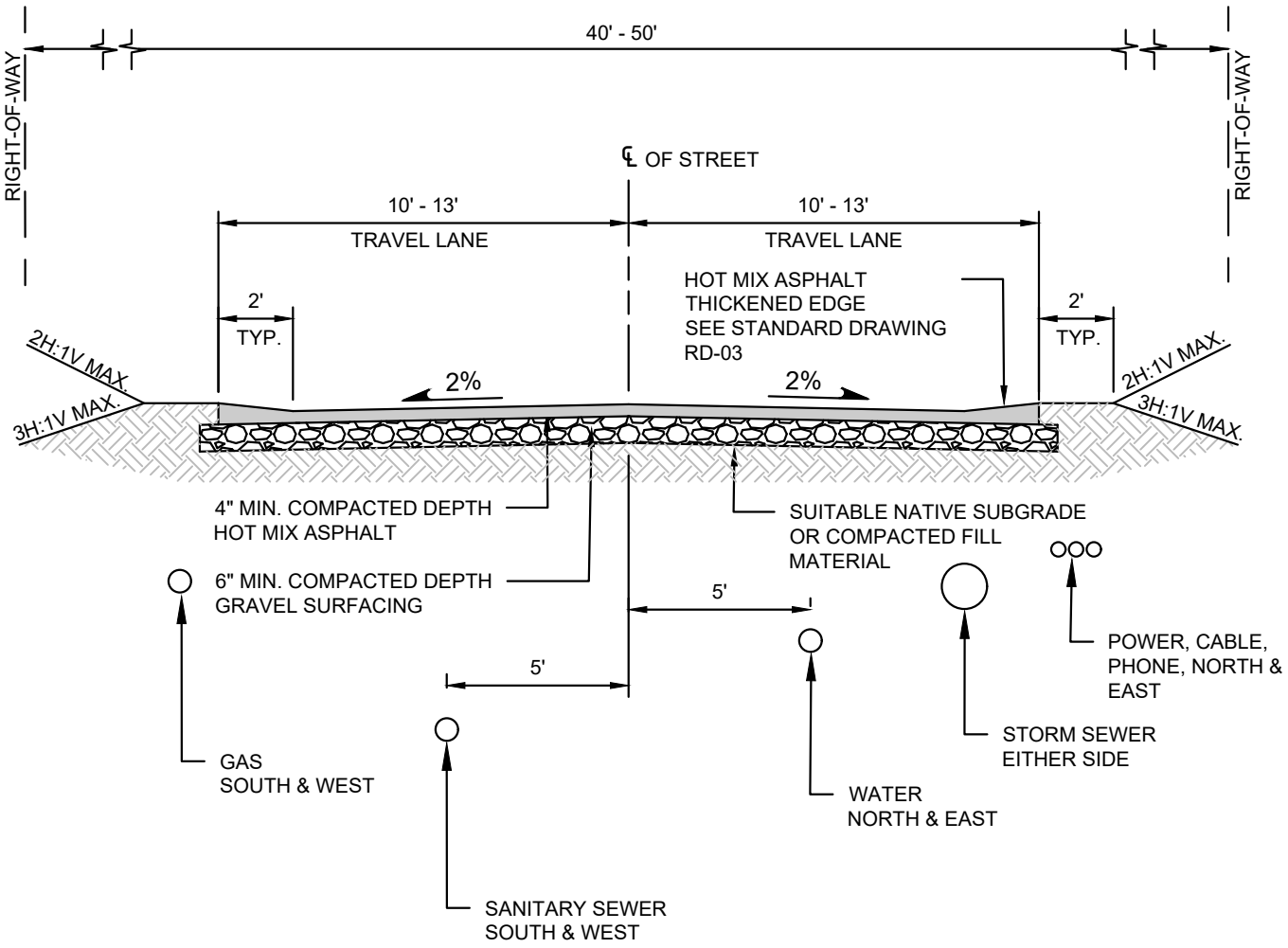
8.9 CALL BEFORE YOU DIG

Builders are responsible for timely notification of utilities in advance of any construction in right-of-way or utility easements.

8.10 UTILITY CERTIFICATION

All permits for new placement and replacement of existing utilities and utility structures shall be accompanied by written certification from the utility's professional engineer or from an agent authorized by the utility to certify that the installations conform to these Standards, and that the proposed work is in conformity with sound engineering principles relating to highway safety.

STANDARD DETAILS



NOTES:

1. GRAVEL SURFACING (CRUSHED SURFACING BASE AND/OR TOP COURSE) TO BE PLACED ON SUITABLE NATIVE SUBGRADE OR COMPACTED FILL MATERIAL. (95% COMPACTION REQUIRED).
2. POWER, CABLE, PHONE AND GAS FACILITIES SHALL NOT BE LOCATED BENEATH THE PAVEMENT, EXCEPT FOR SERVICES AND AT INTERSECTIONS. UTILITY EASEMENTS, ADJACENT TO THE RIGHT-OF-WAY MAY BE REQUIRED.
3. PEDESTRIAN WALKWAYS, PER SECTION 7.11 SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY.
4. THE DEVELOPER MAY SUBMIT AN ALTERNATE PAVEMENT DESIGN TO THE TOWN ENGINEER FOR CONSIDERATION. THE PAVEMENT DESIGN SHALL BE PREPARED BY ENGINEER LICENSED IN THE STATE OF WASHINGTON.

TOWN OF
YARROW POINT
4030 95TH AVENUE NE
YARROW POINT, WA 98004
P: (425) 454-6994
www.ci.yarrow-point.wa.us

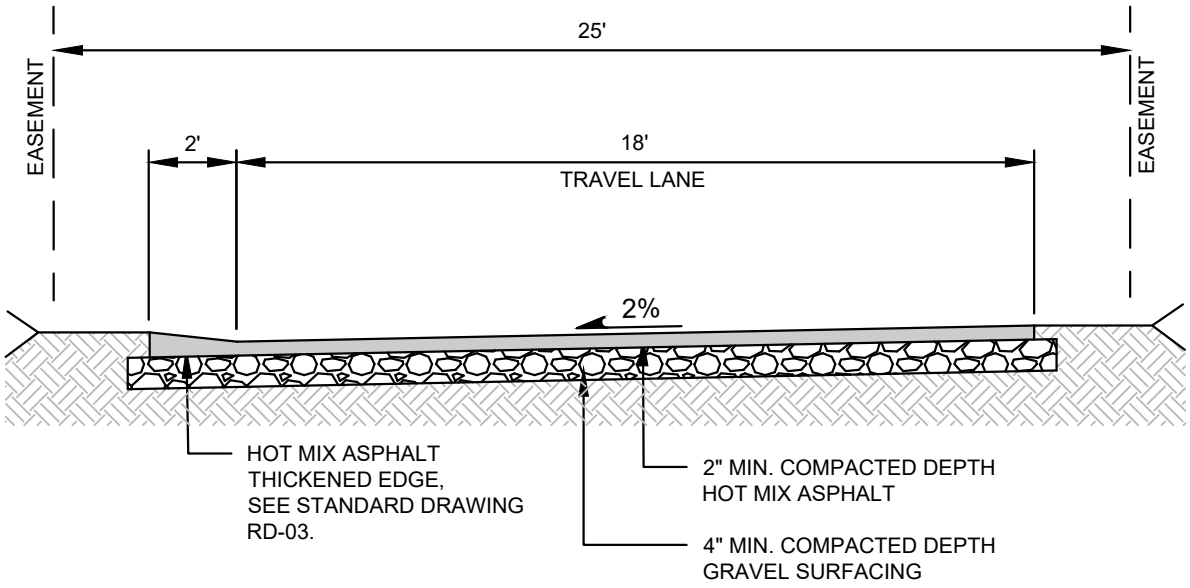
STREET CROSS SECTIONS (COLLECTOR AND LOCAL ACCESS)

APPROVED:

TOWN OF YARROW POINT DATE

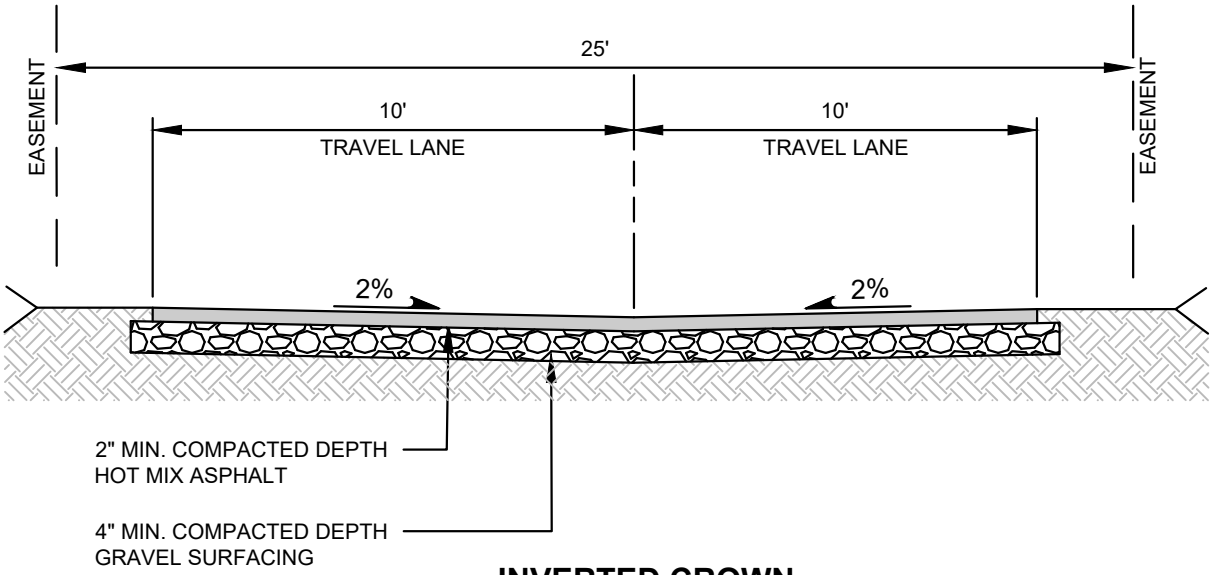
DWG. NO.

RD-01



THICKENED EDGE

NOT TO SCALE



INVERTED CROWN

NOT TO SCALE

NOTES:

1. GRAVEL SURFACING (CRUSHED SURFACING BASE AND/OR TOP COURSE) TO BE PLACED ON SUITABLE NATIVE SUBGRADE OR COMPACTED FILL MATERIAL. (95% COMPACTION REQUIRED).

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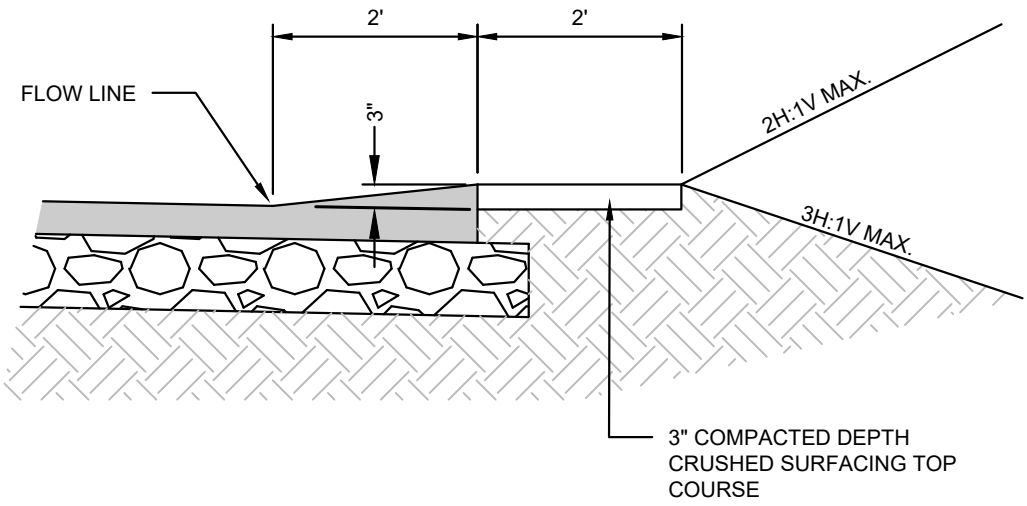
STREET CROSS SECTIONS (PRIVATE LANE)

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-02



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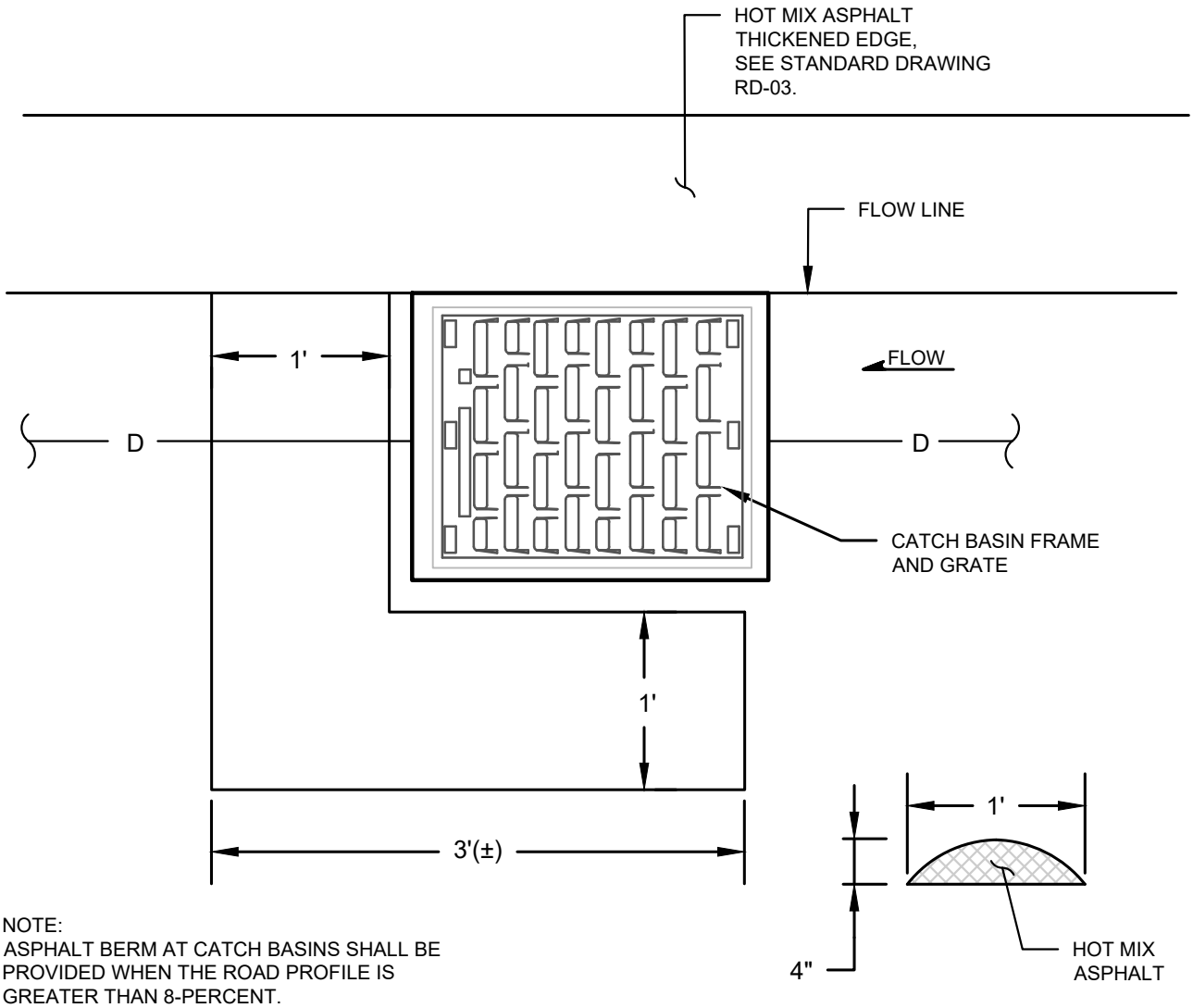
THICKENED EDGE DETAIL

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-03



NOTE:
ASPHALT BERM AT CATCH BASINS SHALL BE PROVIDED WHEN THE ROAD PROFILE IS GREATER THAN 8-PERCENT.

ASPHALT BERM SECTION

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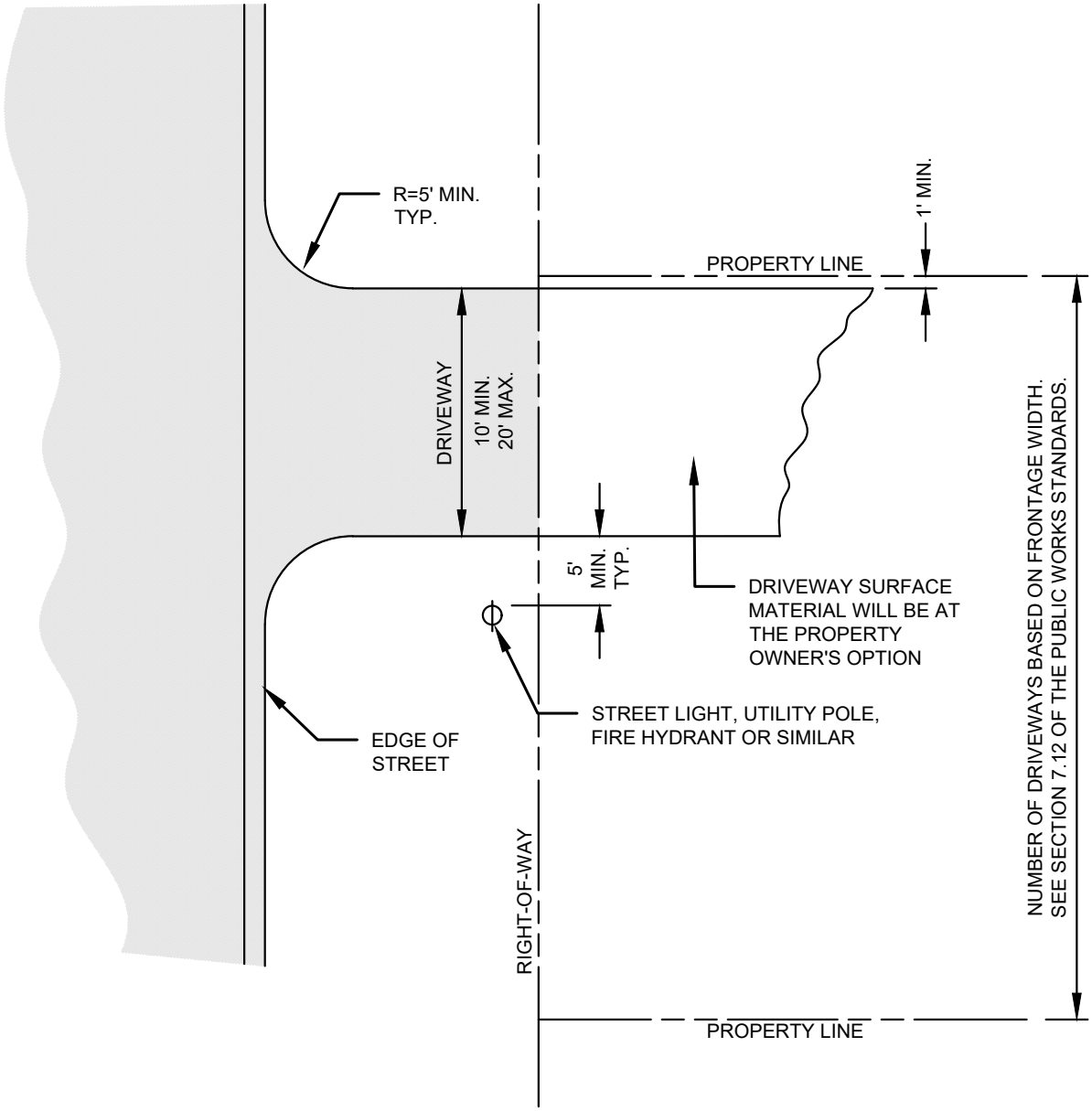
ASPHALT BERM AT CATCH BASIN DETAIL

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-04



NOTES:

1. DRIVEWAY ENTRANCE GRADES AND SLOPES SHALL CONFORM TO SECTION 7.12 OF THE PUBLIC WORKS STANDARDS.
2. DRIVEWAY ENTRANCES WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE MAINTAINED BY THE PROPERTY OWNER.
3. DRIVEWAY ENTRANCE MATERIAL SHALL CONFORM TO SECTION 7.12 OF THE PUBLIC WORKS STANDARDS.
4. AN ENCROACHMENT AGREEMENT IS REQUIRED FOR ALL EXISTING AND PROPOSED ENCROACHMENTS IN THE PUBLIC RIGHT-OF-WAY.

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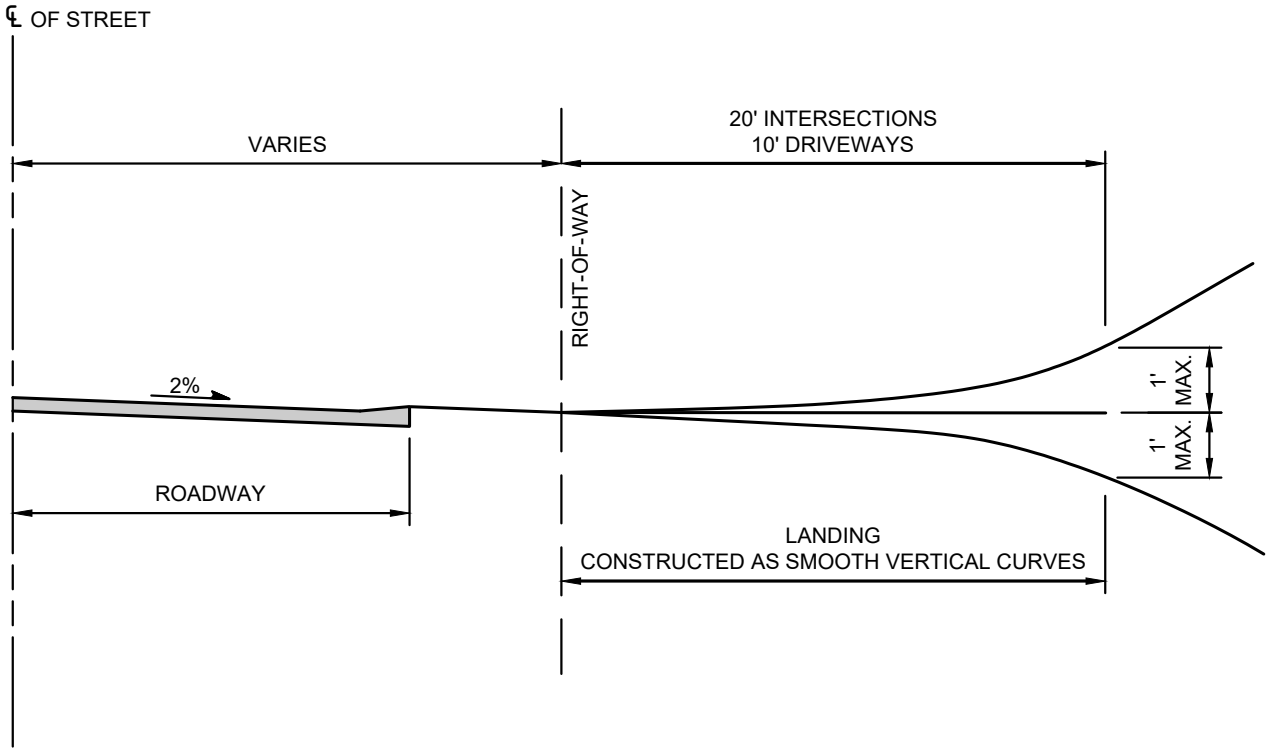
DRIVEWAY ENTRANCE LOCATIONS

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-05



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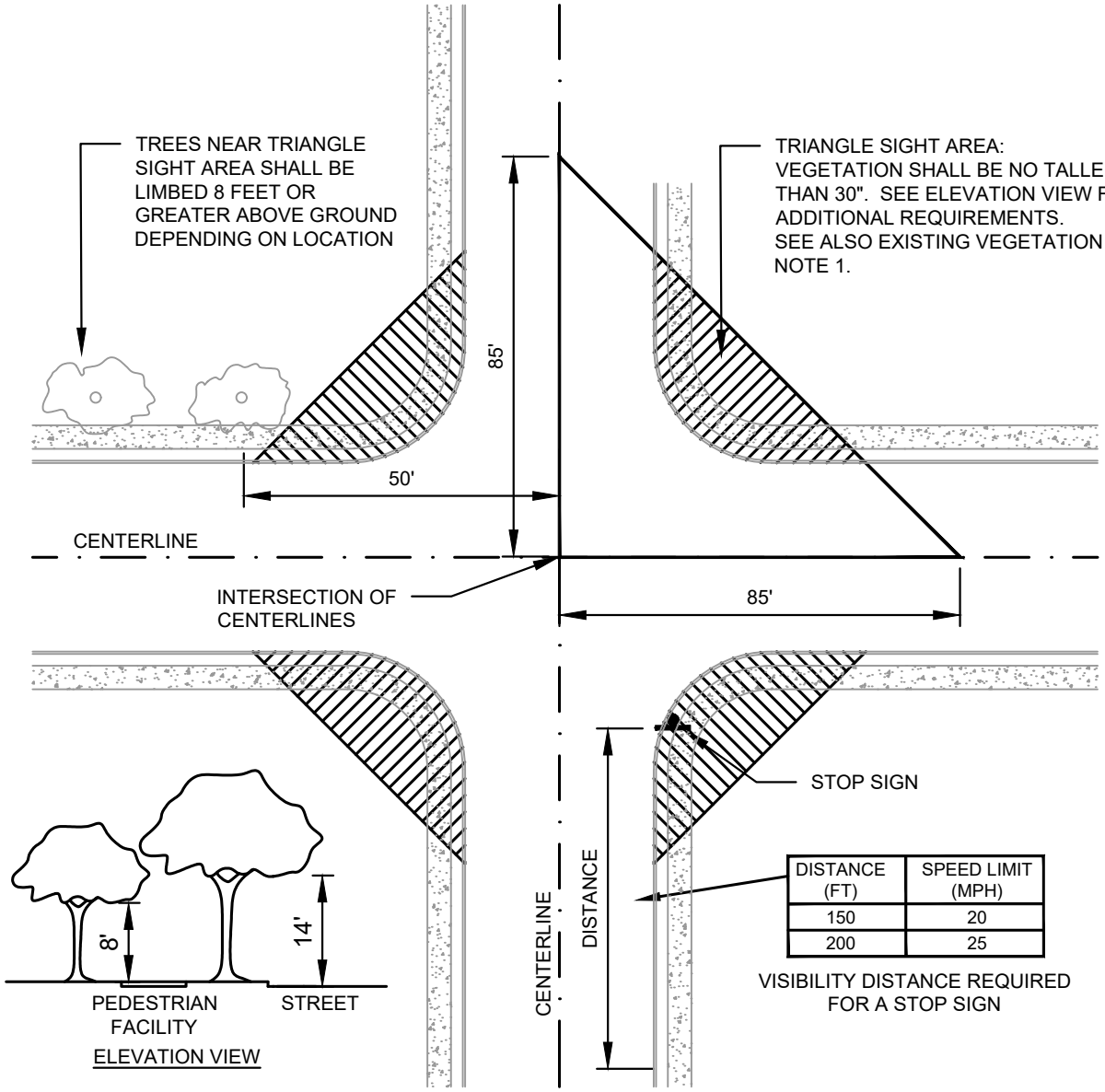
VERTICAL TRANSITION DETAIL (INTERSECTIONS AND DRIVEWAYS)

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-06



NOTES FOR NEW DEVELOPMENT:

1. TREES SHALL NOT BE PLACED IN SUCH A WAY THAT THEY IMPEDE THE SAFE FLOW OF TRAFFIC BY BLOCKING THE VIEW OF TRAFFIC SIGNS, PEDESTRIANS AND OTHER VEHICLES.

2. DEVELOPER SHALL COORDINATE WITH VARIOUS CONTRACTORS TO ENSURE NO CONFLICTS BETWEEN STREETS AND TREES ARE CREATED.

NOTES FOR EXISTING VEGETATION:

1. OVERGROWN VEGETATION IMPEDES THE SAFE FLOW OF TRAFFIC WHEN IT BLOCKS THE VIEW OF TRAFFIC SIGNS, PEDESTRIANS AND OTHER VEHICLES. IF OVERGROWN VEGETATION IS BLOCKING VISIBILITY IN THE STREET OR INTERSECTION, IT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO TRIM THE VEGETATION TO MEET THIS STANDARD.
2. TO ENSURE VISIBILITY, TREE LIMBS OVER THE STREET SHALL BE TRIMMED UP TO 14 FEET. TREE LIMBS OVER PEDESTRIAN FACILITIES SHALL BE TRIMMED TO 8 FEET.

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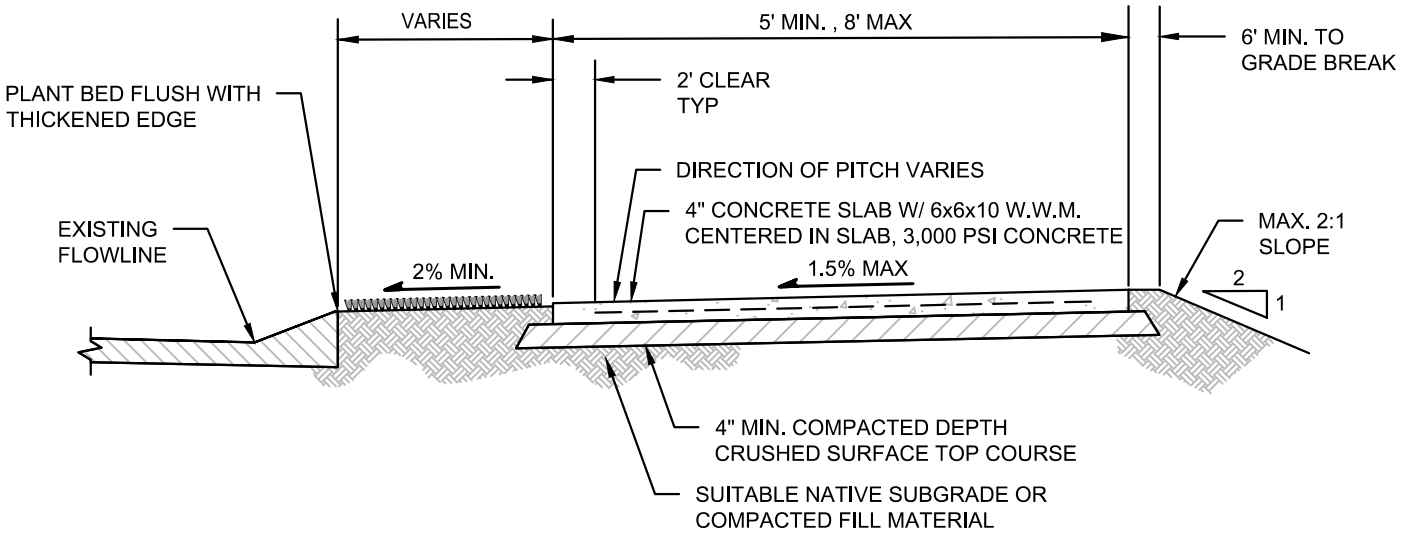
INTERSECTION SIGHT TRIANGLES

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-07



NOTE:

1. CRUSHED SURFACING TOP COURSE TO BE PLACED ON SUITABLE NATIVE SUBGRADE OR COMPACTED FILL MATERIAL. (95% COMPACTION REQUIRED) .

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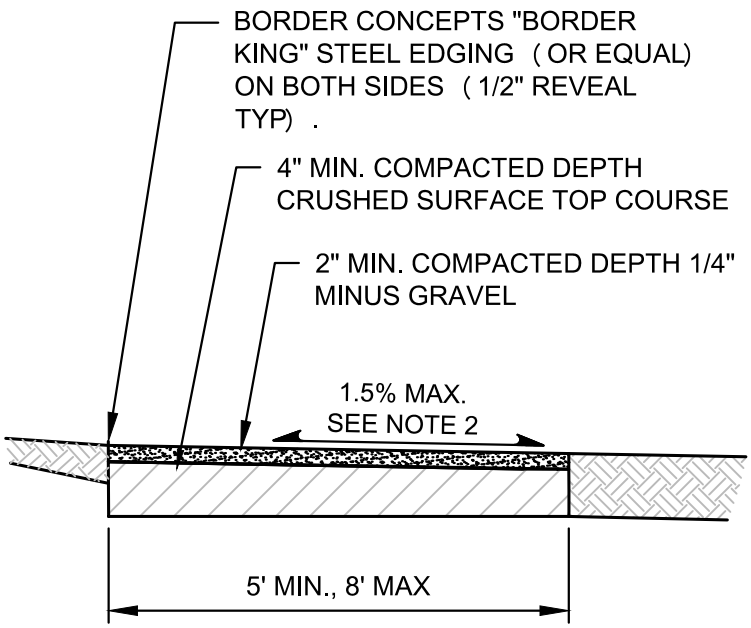
PEDESTRIAN PATHWAY - CONCRETE

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-08a



NOTES:

1. CRUSHED SURFACING TOP COURSE TO BE PLACED ON SUITABLE NATIVE SUBGRADE OR COMPACTED FILL MATERIAL. (95% COMPACTION REQUIRED).
2. TRANSITION SLOPE TO MAINTAIN POSITIVE DRAINAGE.

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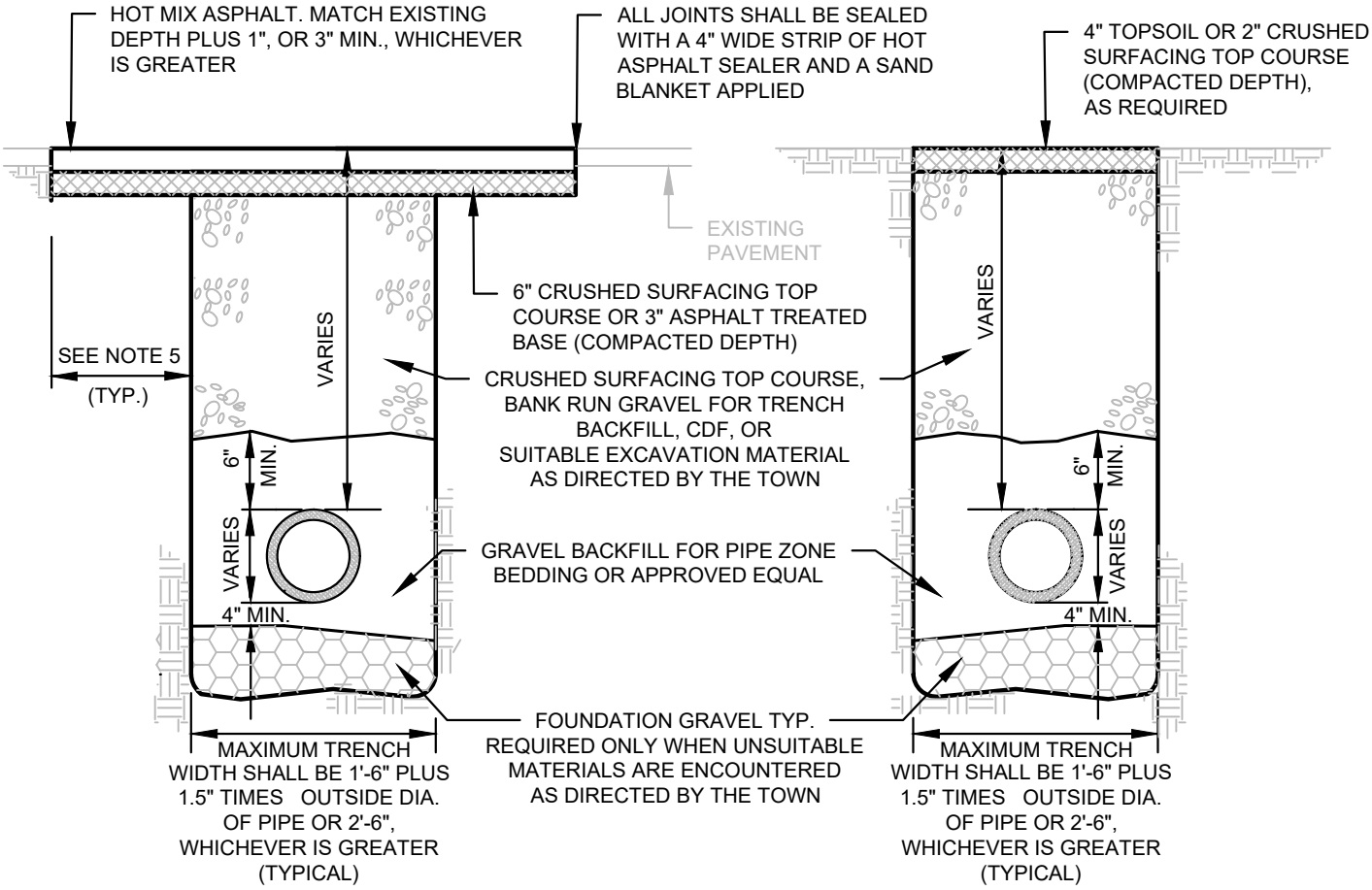
PEDESTRIAN PATHWAY - GRAVEL

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-08b



WITHIN TRAVELED WAY **OUTSIDE OF TRAVELED WAY**

NOTES:

1. ALL MATERIALS EXCEPT HOT MIX ASPHALT AND PIPE ZONE BEDDING SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY.
2. COMPACTION: PIPE ZONE BEDDING SHALL BE COMPACTED TO 95% MAX. AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE COMPACTED TO 90% OUTSIDE OF THE TRAVELED WAY AND 95% IN TRAVELED WAY AND SHOULDERS AS DETERMINED BY ASTM D1557.
3. PAVEMENT SHALL BE SAWCUT, FULL DEPTH.
4. LONGITUDINAL TRENCH: HALF STREET GRIND AND OVERLAY IS REQUIRED. LENGTH SHALL MATCH THE LENGTH OF THE TRENCH.
5. TRANSVERSE TRENCH: SAWCUT 1' BEYOND TRENCH WIDTH IF PAVEMENT IS OLDER THAT 5 YEARS OR HAS A PCR OF 74 OR LESS (PER TIB RATING); 5' BEYOND TRENCH IF PAVEMENT IS NEWER THAN 5 YEARS OR HAS A PCR OF 75 OR BETTER. CONTACT THE TOWN ENGINEER FOR PCR VALUES.

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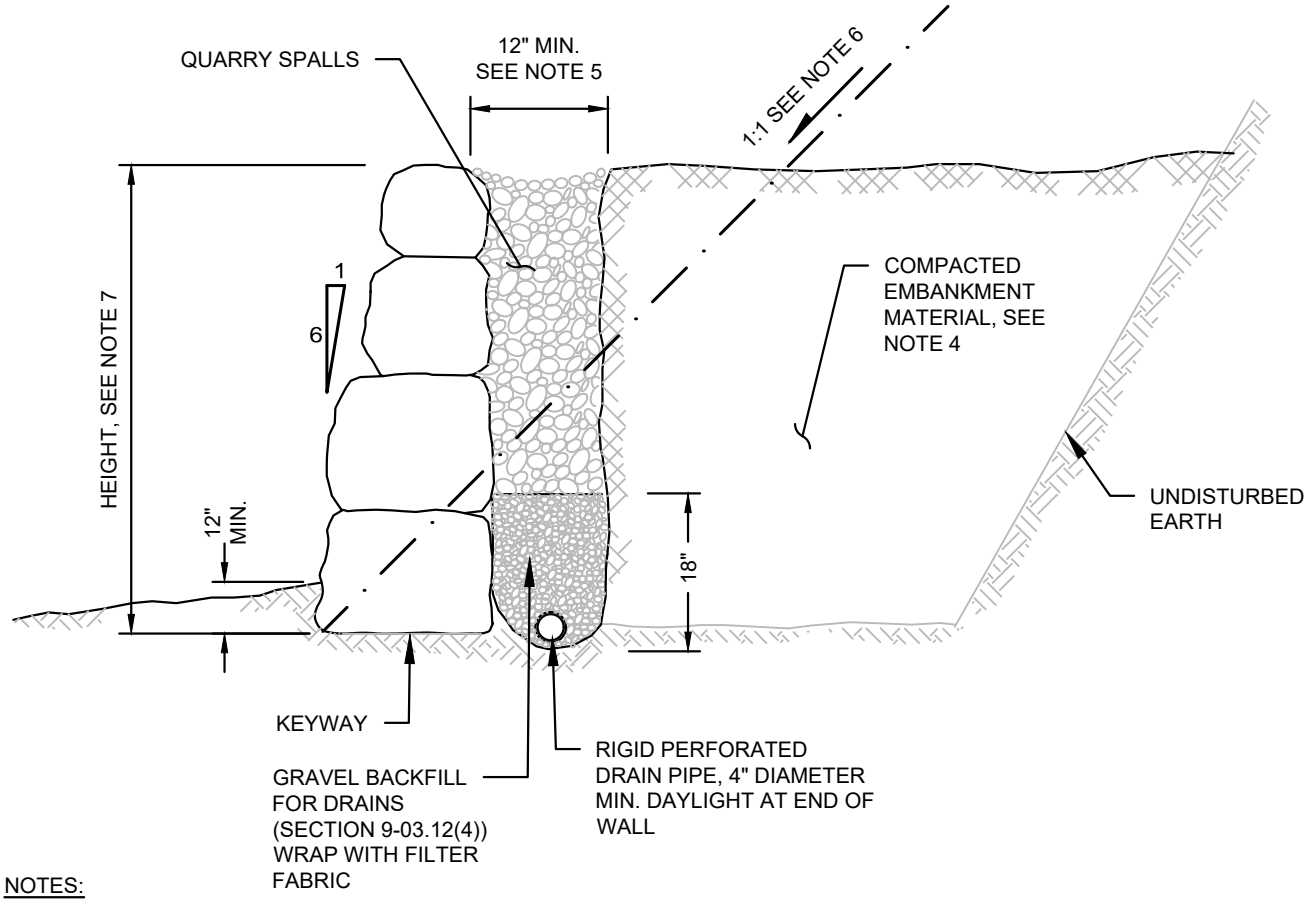
TRENCH - PAVEMENT RESTORATION

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-09



NOTES:

1. A FENCE OR HANDRAIL REQUIRED WHEN ROCK WALL HEIGHT EXCEEDS 30 INCHES.
2. PRIOR TO ROCK PLACEMENT, THE FOUNDATION (KEYWAY) SHALL BE EXCAVATED AND COMPACTED TO 95 PERCENT OF THE MAX. DRY DENSITY.
3. BOTTOM ROCKS SHALL HAVE FULL CONTACT WITH THE FOUNDATION SOILS. THE EXCAVATION SHALL BE SHAPED TO FIT THE ROCKS.
4. EMBANKMENT MATERIAL CONSISTING OF GRAVEL BORROW (SECTION 9-03.14(1)) OR SUITABLE NATIVE MATERIAL SHALL BE PLACED IN THIN LIFTS, NOT EXCEEDING SIX INCHES IN THICKNESS AND COMPACTED TO 95 PERCENT OF THE MAX. DRY DENSITY.
5. THE TOP OF ALL ROCK WALLS SHALL BE CONFIGURED TO PREVENT SURFACE DRAINAGE OVER THE TOP OF THE WALL.
6. ZONE OF INFLUENCE. FLATTER SLOPE MAY BE REQUIRED IN LESS STABLE SOILS. DRIVEWAYS AND ROADS SHALL LIE BEYOND THE ZONE OF INFLUENCE.
7. THE MAXIMUM WALL HEIGHT IS EIGHT (8) FEET, MEASURED FROM THE KEYWAY BOTTOM. ROCK WALLS FOUR (4) FEET OR HIGHER REQUIRE A BUILDING PERMIT. ROCK WALLS SUPPORTING A SURCHARGE (DRIVEWAY, ROAD, BUILDING, OR PARKING AREA) SHALL BE DESIGN BY A LICENSED STRUCTURAL ENGINEER.

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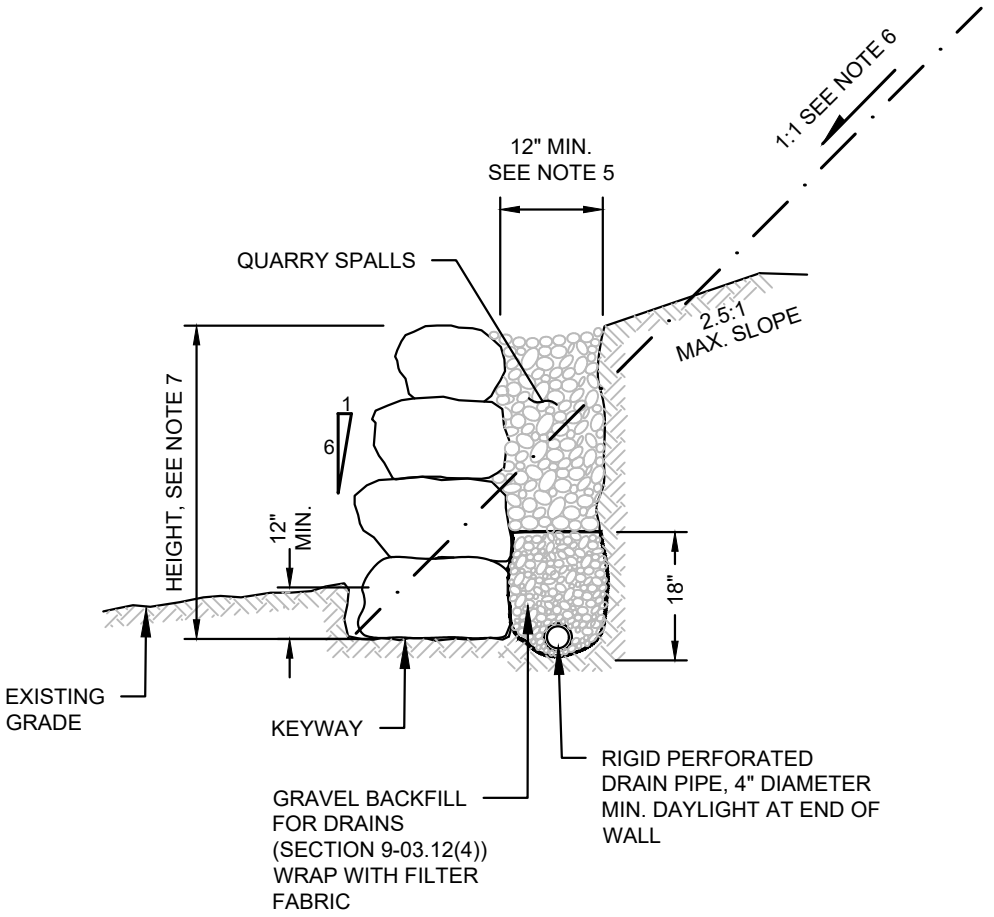
ROCK WALL FILL SECTION

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-10



NOTES:

1. A FENCE OR HANDRAIL REQUIRED WHEN ROCK WALL HEIGHT EXCEEDS 30 INCHES.
2. PRIOR TO ROCK PLACEMENT, THE FOUNDATION (KEYWAY) SHALL BE EXCAVATED AND COMPACTED TO 95 PERCENT OF THE MAX. DRY DENSITY.
3. BOTTOM ROCKS SHALL HAVE FULL CONTACT WITH THE FOUNDATION SOILS. THE EXCAVATION SHALL BE SHAPED TO FIT THE ROCKS.
4. EMBANKMENT MATERIAL CONSISTING OF GRAVEL BORROW (SECTION 9-03.14(1)) OR SUITABLE NATIVE MATERIAL SHALL BE PLACED IN THIN LIFTS, NOT EXCEEDING SIX INCHES IN THICKNESS AND COMPACTED TO 95 PERCENT OF THE MAX. DRY DENSITY.
5. THE TOP OF ALL ROCK WALLS SHALL BE CONFIGURED TO PREVENT SURFACE DRAINAGE OVER THE TOP OF THE WALL.
6. ZONE OF INFLUENCE. FLATTER SLOPE MAY BE REQUIRED IN LESS STABLE SOILS. DRIVEWAYS AND ROADS SHALL LIE BEYOND THE ZONE OF INFLUENCE.
7. THE MAXIMUM WALL HEIGHT IS EIGHT (8) FEET, MEASURED FROM THE KEYWAY BOTTOM. ROCK WALLS FOUR (4) FEET OR HIGHER REQUIRE A BUILDING PERMIT. ROCK WALLS SUPPORTING A SURCHARGE (DRIVEWAY, ROAD, BUILDING, OR PARKING AREA) SHALL BE DESIGN BY A LICENSED STRUCTURAL ENGINEER.

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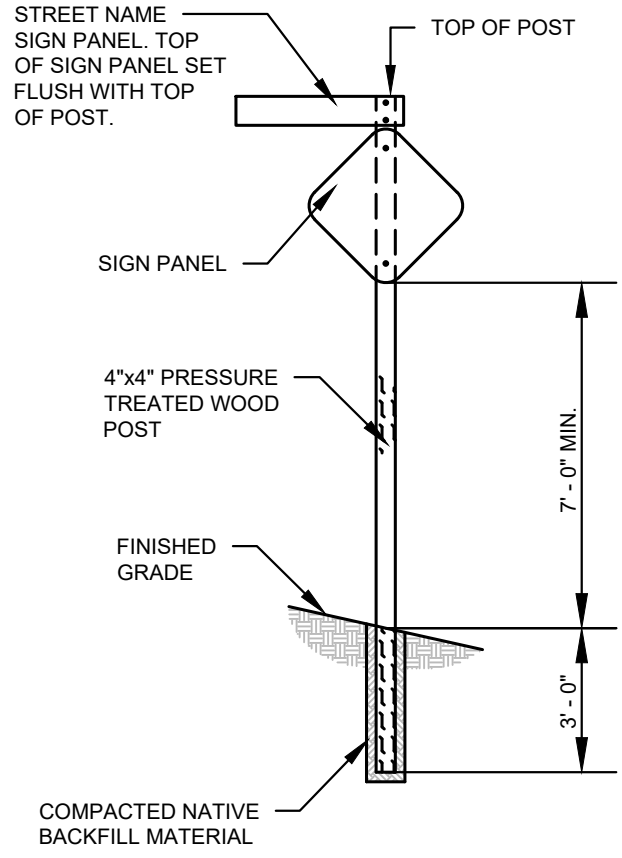
ROCK WALL CUT SECTION

APPROVED:

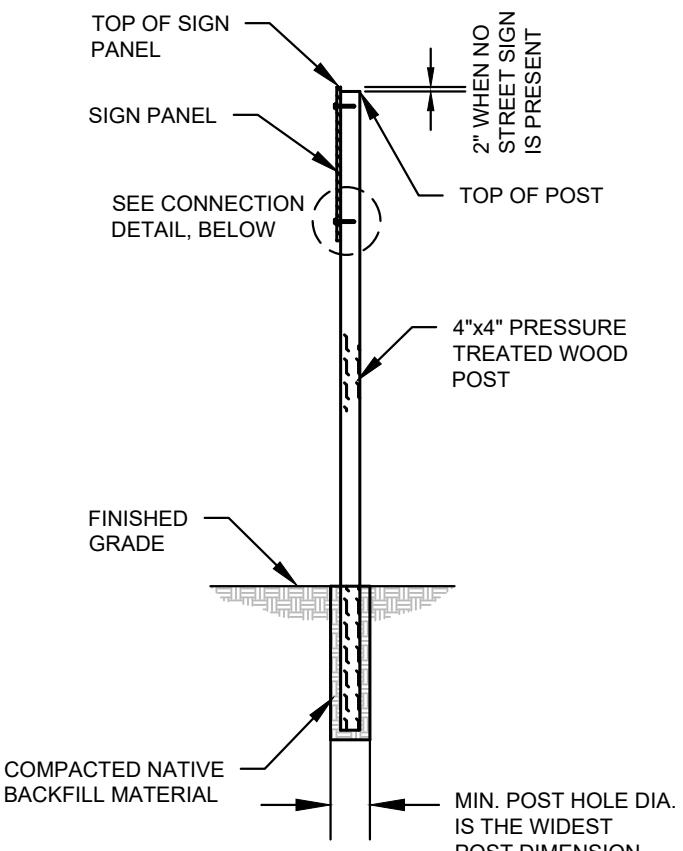
TOWN OF YARROW POINT DATE

DWG. NO.

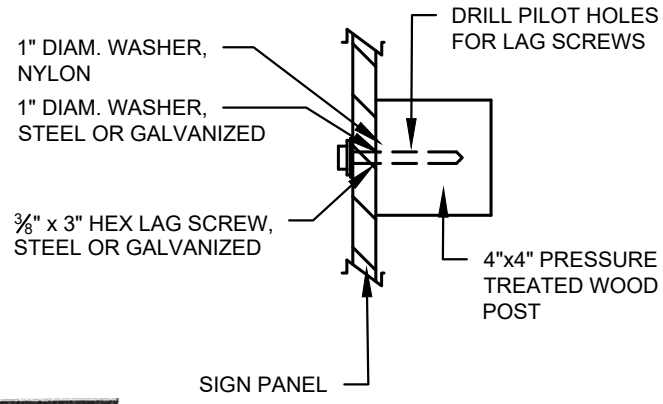
RD-11



FRONT VIEW



SIDE VIEW



CONNECTION DETAIL

TOWN OF YARROW POINT
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STREET NAME / REGULATORY SIGN INSTALLATION

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-12

ASPHALT PAVEMENT PATCHING & RESTORATION - GENERAL NOTES

1. A FULL DEPTH PATCH SHALL MATCH EXISTING THICKNESS PLUS ONE INCH OR THREE INCHES MIN., WHICHEVER IS GREATER, SHALL BE CONSTRUCTED ON AND OVER THE DISTURBED AREA AND TO A MINIMUM LATERAL DISTANCE OF 12-INCHES BEYOND THE BOUNDARIES OF THE DISTURBED AREA.

2. A MINIMUM 2-INCH DEEP GRIND AND OVERLAY IS REQUIRED FOR THE RESTORED AREA BEYOND THE FULL DEPTH PATCH IF THE DISTURBED AREA IS GREATER THAN EITHER 5-FT TRANSVERSELY (PERPENDICULAR TO THE ROADWAY CENTERLINE) OR 5-FT LONGITUDINALLY (PARALLEL TO THE ROADWAY CENTERLINE).

3. FINAL RESTORATION SHALL USE IN-KIND PATCHING MATERIAL TO MATCH THE EXISTING PAVEMENT THAT WAS REMOVED, INCLUDING PERMEABLE PAVEMENT OR CONCRETE. ASPHALT CONCRETE MIX SHALL BE APPROVED BY THE TOWN ENGINEER.

4. ALL TRENCH BACKFILL UNDER ROADWAYS SHALL BE CRUSHED SURFACING TOP COURSE (CSTC) , BANK RUN GRAVEL FOR TRENCH BACKFILL, OR SUITABLE EXCAVATION MATERIAL COMPACTED TO 95% MAXIMUM DRY DENSITY, OR CONTROLLED DENSITY FILL WHICH MEETS CURRENT WSDOT STANDARDS AS STATED IN 2-09.3(1)E OF THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION MANUAL M41-10.

5. NO IRREGULAR PATCH PERIMETER SHALL BE ALLOWED. EACH PATCH SHALL HAVE A SINGLE STRAIGHT EDGE IN BOTH THE TRANSVERSE (PERPENDICULAR TO THE ROADWAY CENTERLINE) AND LONGITUDINAL (PARALLEL TO THE ROADWAY CENTERLINE) DIRECTIONS.

6. ALL SAWCUTS SHALL BE VERTICAL. EXPOSED ASPHALT EDGES SHALL BE TACKED AND TOP SEALED WITH HOT ASPHALT SEALER AND PROVIDED A SAND BLANKET TO ALLEVIATE TRACKING.

7. PAVING FABRIC IF FOUND, WILL NOT REQUIRE REPLACEMENT.

8. A PATCH SHALL BE EXTENDED TO THE CURB, THICKENED EDGE, OR EDGE OF LANE IF THE PATCH IS LOCATED WITHIN 24-INCHES OF SUCH FEATURE.

9. IF THE TRANSVERSE DIMENSION OF A PATCH IS GREATER THAN HALF THE LANE WIDTH, THEN THE PATCH SHALL BE EXTENDED FROM THE CURB/ EDGE OF PAVEMENT TO THE FULL LANE WIDTH OR THE CENTERLINE OF THE ROADWAY, WHICHEVER APPLIES.

10. IF TWO (2) OR MORE PATCHES ARE LOCATED WITHIN 48-INCHES OF EACH OTHER IN THE TRANSVERSE DIRECTION (PERPENDICULAR TO CENTERLINE) OR 10-FEET OF EACH OTHER IN THE LONGITUDINAL DIRECTION (PARALLEL TO CENTERLINE), THEY SHALL BE COMBINED INTO A SINGLE LARGER PATCH WITH GRIND AND OVERLAY.

11. IF A NEW PATCH IS MADE WITHIN ANY PORTION OF AN EXISTING PATCH, THEN THE ENTIRE ORIGINAL PATCH SHALL BE REPLACED.

12. IF A PATCH WILL EXTEND OVER A LANE EDGE OR CENTERLINE OF THE ROADWAY, THEN THE PATCH SHALL BE EXTENDED TO THE FULL ROADWAY WIDTH OR NEAREST LANE EDGE.

13. TEMPORARY PATCHING MAY BE ALLOWED AT THE DISCRETION OF THE TOWN ENGINEER AND ON SUCH TERMS AND CONDITIONS AS THE TOWN ENGINEER DETERMINES APPROPRIATE. HOWEVER, ALL PERMANENT PATCHING SHALL BE COMPLETED NO LATER THAN 30 CALENDAR DAYS AFTER THE ORIGINAL DATE OF THE TRENCH EXCAVATION.

14. THE TOWN ENGINEER SHALL INSPECT ALL PAVEMENT RESTORATION DURING AND AT THE COMPLETION OF SUCH WORK. NO PAVEMENT RESTORATION SHALL BE DEEMED COMPLETE UNTIL THE TOWN ENGINEER HAS APPROVED SUCH WORK IN WRITING.

15. ASPHALT DEPTHS IN EXCESS OF 3-INCHES SHALL BE DONE IN TWO LIFTS. AT NO TIME SHALL A SINGLE ASPHALT LIFT EXCEED 3-INCHES WITHOUT COMPACTION.

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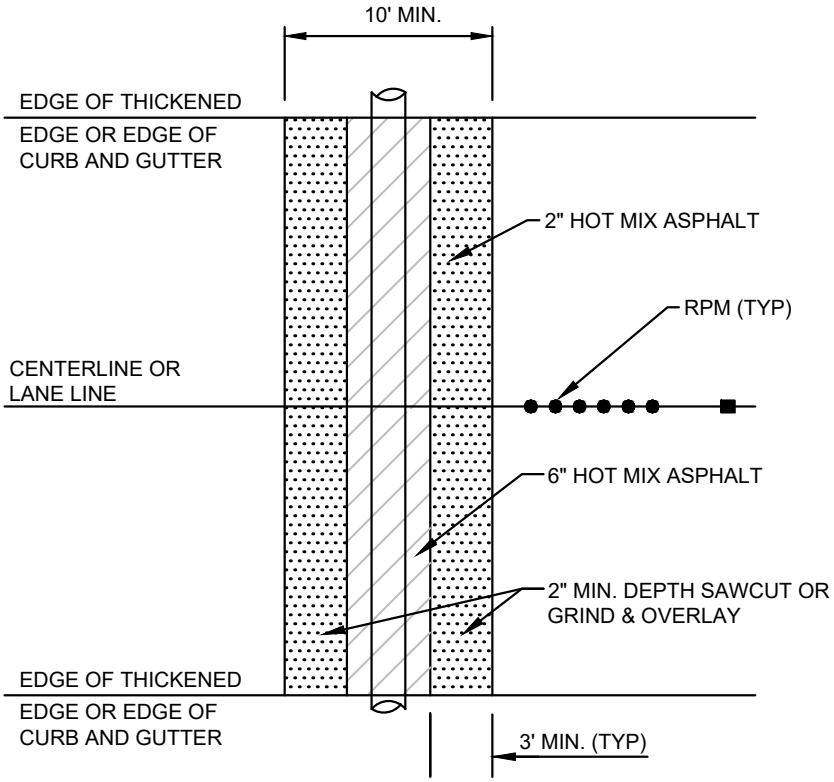
ASPHALT PAVEMENT PATCHING AND RESTORATION GENERAL NOTES

APPROVED:

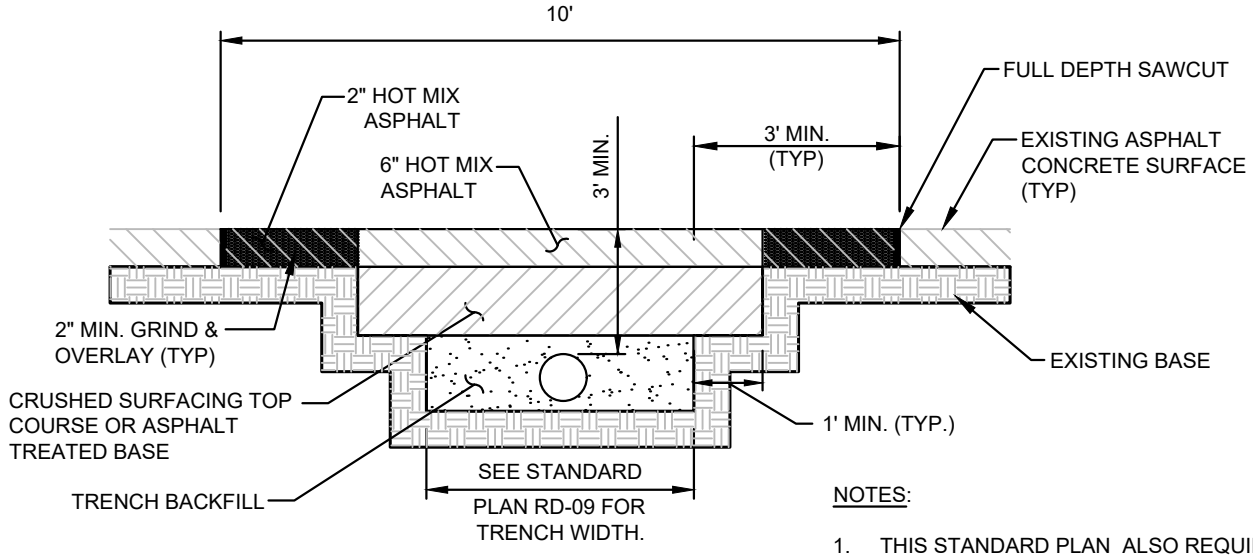
TOWN OF YARROW POINT DATE

DWG. NO.

RD-13a



PLAN



SECTION

NOTES:

1. THIS STANDARD PLAN ALSO REQUIRES ADHERENCE TO ALL GENERAL NOTES LISTED ON STANDARD PLAN RD-13a.
2. SEE TRENCH - PAVEMENT RESTORATION STANDARD PLAN RD-09 FOR ADDITIONAL INFORMATION.

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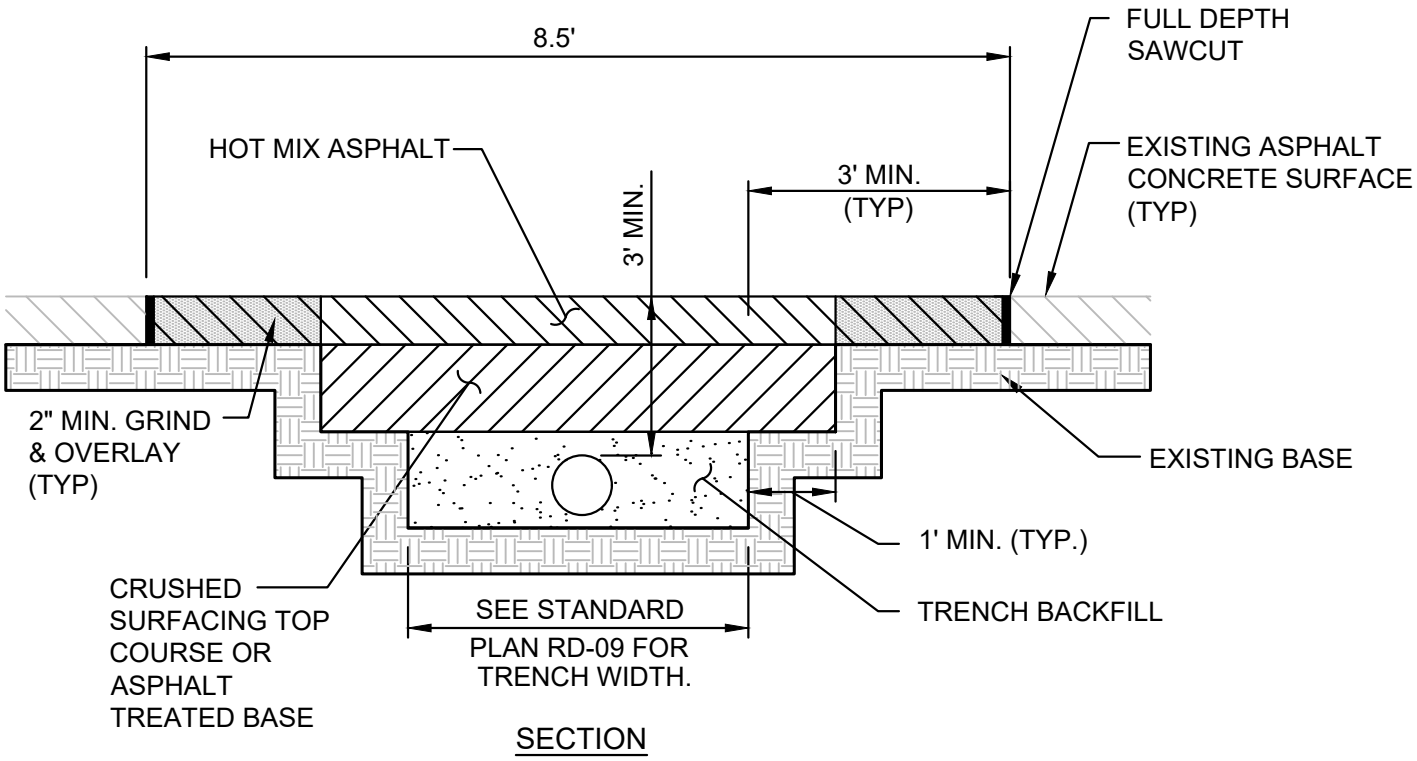
ASPHALT PAVEMENT PATCHING AND RESTORATION DETAILS TRANSVERSE CUT

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-13b



SECTION

NOTES:

1. THIS STANDARD PLAN ALSO REQUIRES ADHERENCE TO ALL GENERAL NOTES LISTED ON STANDARD PLAN RD-13a.
2. SEE TRENCH - PAVEMENT RESTORATION STANDARD PLAN RD-09 FOR ADDITIONAL INFORMATION.

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ASPHALT PAVEMENT PATCHING AND RESTORATION DETAILS LONGITUDINAL CUT

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO. **RD-13c**

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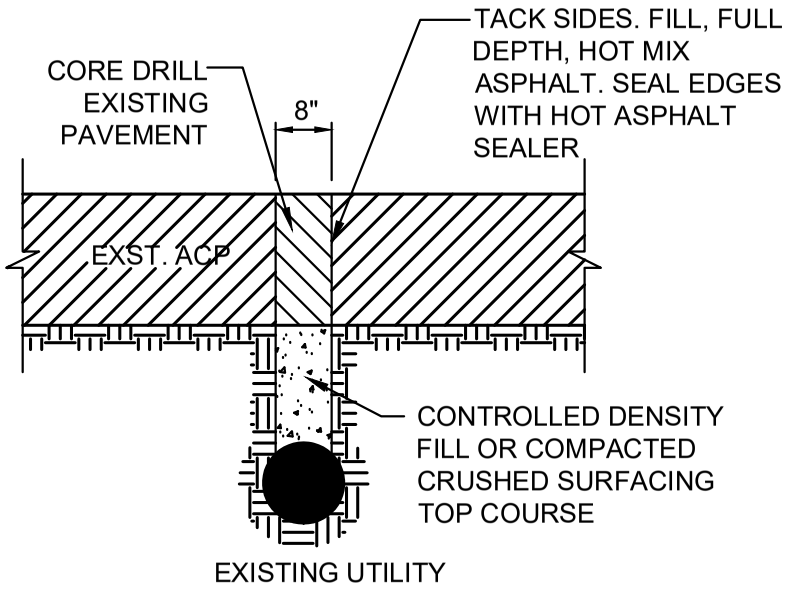
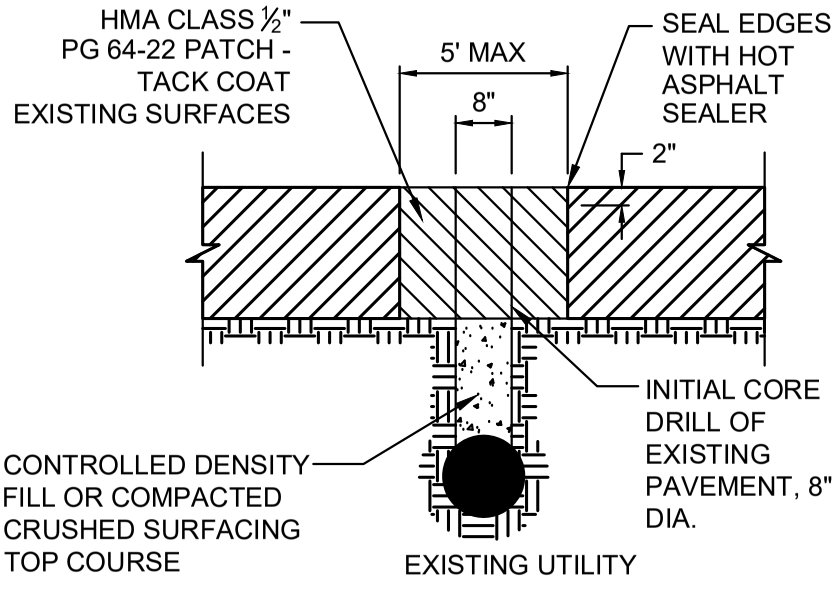
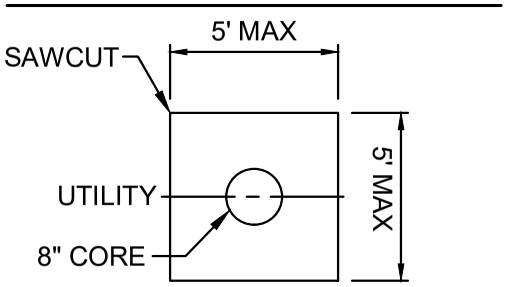


ALTERNATE REPAIR
WHERE ALLOWED BY ENGINEER



NOTES:

1. THE EXISTING PAVEMENT SHALL BE CUT FULL DEPTH WITH AN EIGHT INCH DIAMETER CORE DRILL. THE SUBBASE MATERIAL SHALL BE REMOVED USING A VACUUM EXCAVATOR, KEEPING THE EXCAVATION AS MINIMAL AS POSSIBLE.
2. BACKFILL THE EXCAVATION WITH A SIX INCH CUSHION OF CRUSHED ROCK OVER THE UTILITY THEN PLACE THE REMAINING VOID WITH CDF OR COMPACTED CSTC.
3. REPAIR THE CORED PAVEMENT SECTION WITH HMA CLASS ½" PG 64-22 AND SEAL THE JOINT.
4. IF THE EXCAVATION BELOW THE ASPHALT PAVEMENT IS LARGER THAN THE 8 INCH CORE, THE PAVEMENT RESTORATION WILL INCLUDE A 2' BY 2' TEE PATCH FULL DEPTH OF THE ASPHALT CENTERED ON THE EXCAVATION, AS SHOWN ABOVE AS ALTERNATE REPAIR.
5. IF THE EXCAVATION IS LARGER THAN 2' BY 2', THE STANDARD GRIND AND OVERLAY RESTORATION SHALL BE USED.



NOTE: THIS STANDARD PLAN ALSO REQUIRES ADHERENCE TO ALL GENERAL NOTES LISTED ON STANDARD PLAN RD-13a.

ASPHALT RESTORATION FOR WINDOW CUTS LESS THAN 5-FT x 5-FT

APPROVED:

TOWN OF YARROW POINT

DATE

DWG. NO.

RD-13d

TOWN OF
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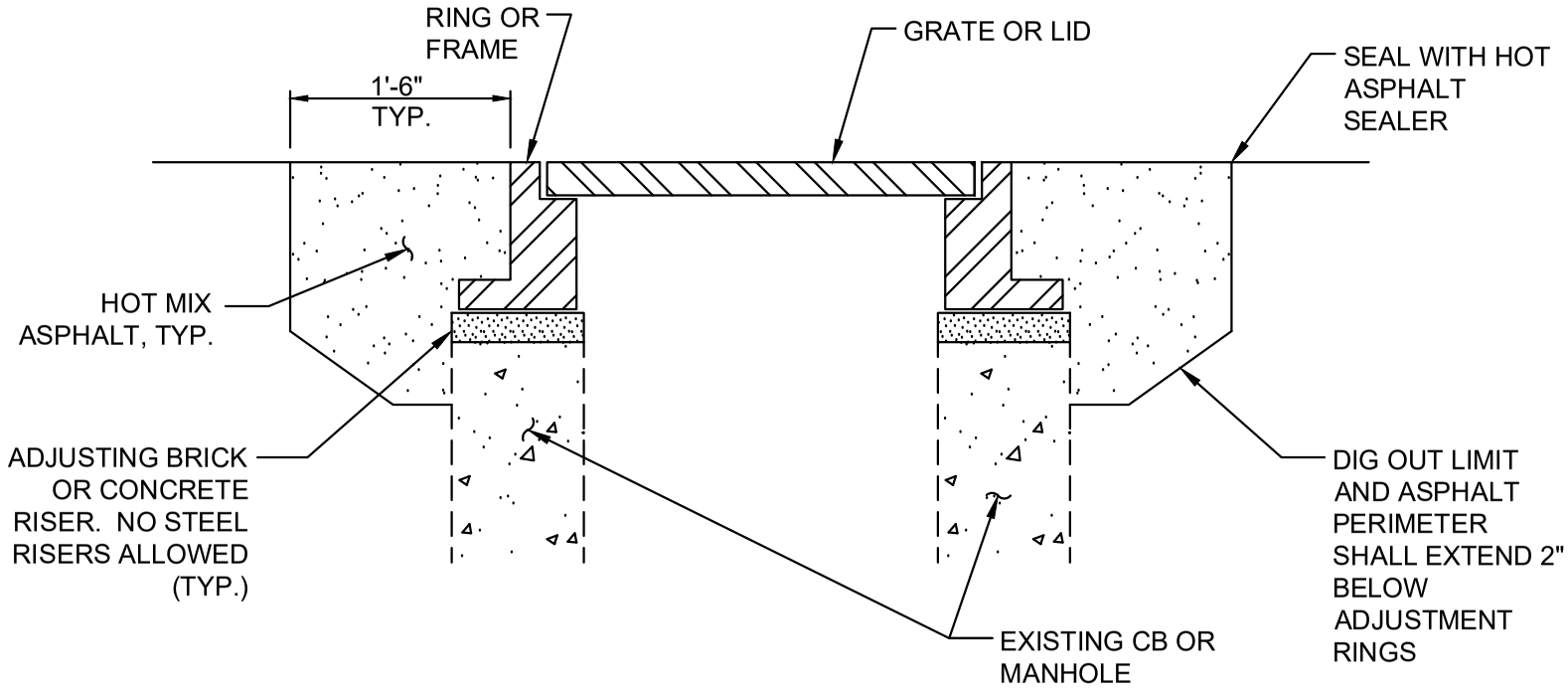
UTILITY MANHOLE AND VAULT ADJUSTMENT

THE EXISTING FRAME AND COVER OR GRATE SHALL BE REMOVED AND THOROUGHLY CLEANED FOR REINSTALLATION TO THE NEW ELEVATION. THE EXISTING STRUCTURE SHALL BE RAISED OR LOWERED TO THE REQUIRED ELEVATION USING CONCRETE BLOCKS, BRICK, AND/OR CONCRETE RINGS. EACH JOINT SHALL BE GROUTED USING A ¾ INCH LAYER OF NON-SHRINK MORTAR, PLASTERED SMOOTH INSIDE AND OUT. COVERS SHALL BE SEATED ON A UNIFORM LAYER OF GROUT TO PREVENT ROCKING.



ASPHALT PAVEMENT
UTILITY ADJUSTMENT DETAIL

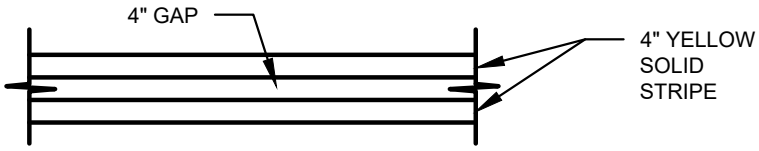
APPROVED:

TOWN OF YARROW POINT

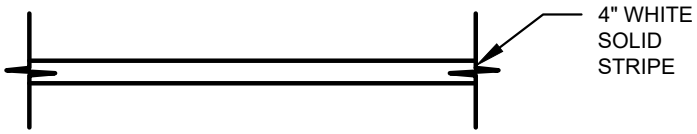
DATE

DWG. NO.

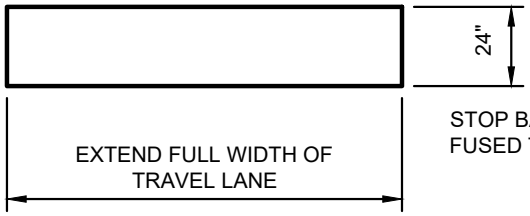
RD-13e



DOUBLE YELLOW CENTERLINE STRIPE

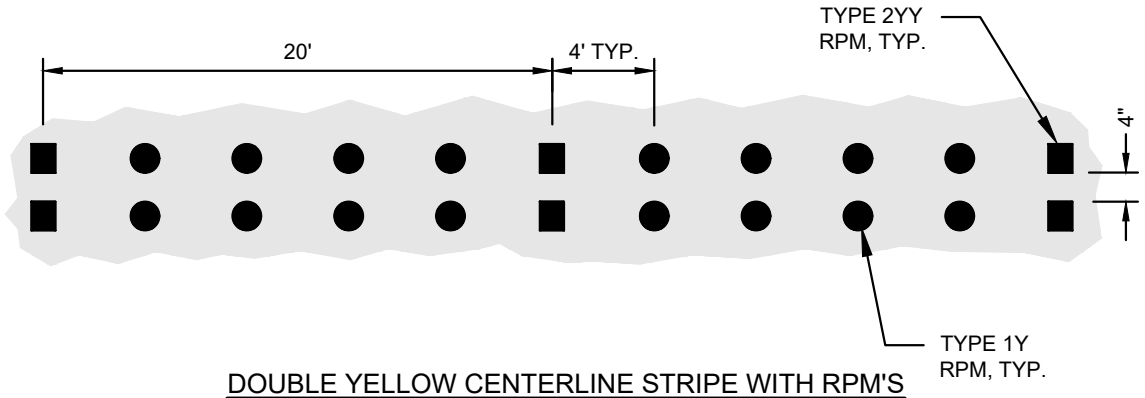


EDGE STRIPE



STOP BARS SHALL BE A TYPE B PRE-FORMED FUSED THERMOPLASTIC MATERIAL

STOP BAR



DOUBLE YELLOW CENTERLINE STRIPE WITH RPM'S

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PAVEMENT MARKINGS

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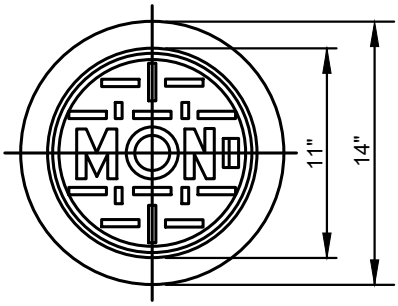
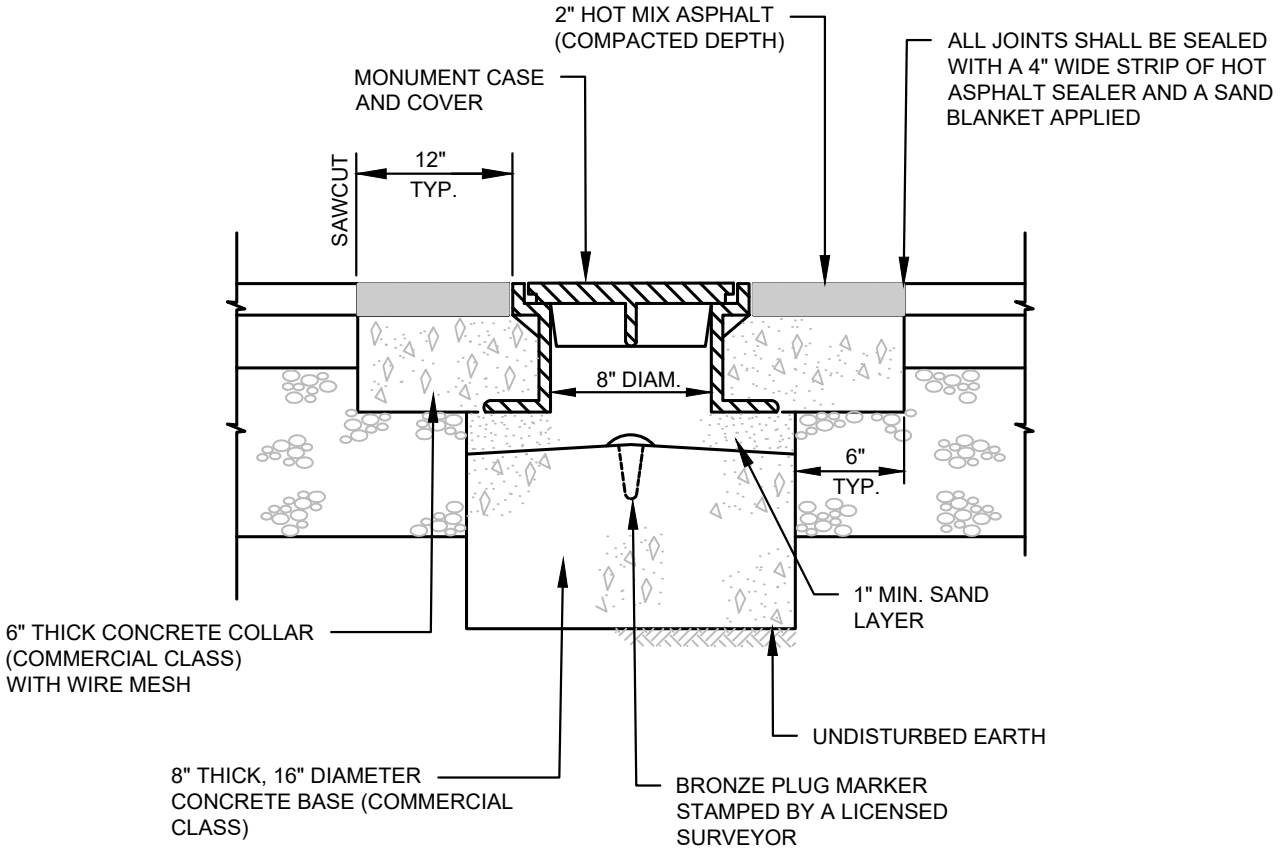
RD-14

NOTES:

1. MACHINE BEARING FACES OF COVER AND CASE TO INSURE POSITIVE FIT.
2. MATERIAL SHALL CONFORM TO THE CURRENT VERSION OF THE "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" PREPARED BY THE WASHINGTON STATE DEPT. OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.
3. SEE SECTION 7.15 OF THE PUBLIC WORKS STANDARDS.



MONUMENT COVER



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CAST-IN-PLACE MONUMENT, CASE AND COVER

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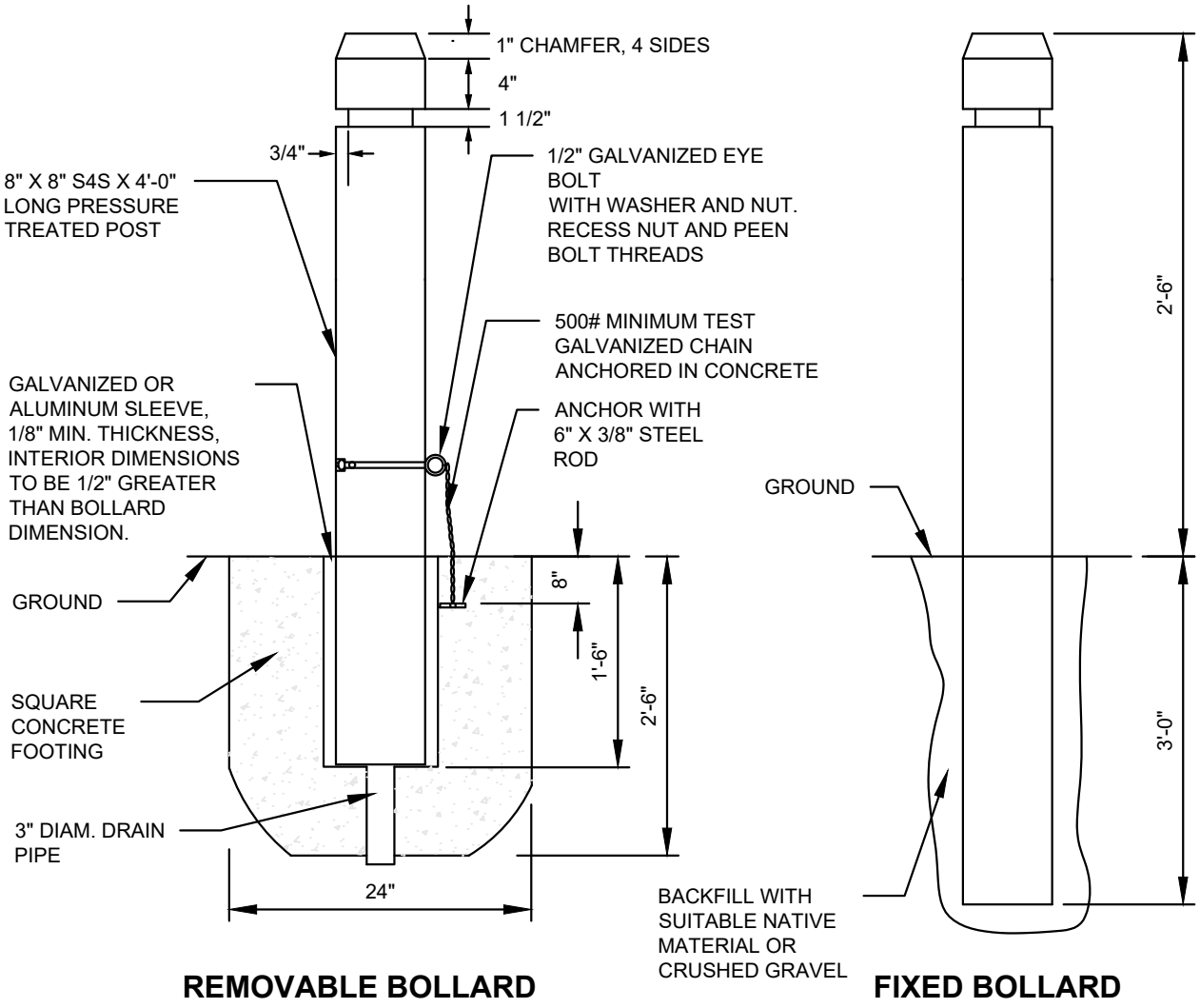
DWG. NO.

RD-15



REMOVABLE BOLLARD **FIXED BOLLARD**

NOTES:

1. TIMBER SHALL BE DOUGLAS FIR, DENSE CONSTRUCTION GRADE AND SHALL BE PRESSURE TREATED.
2. NUTS, BOLTS AND WASHERS SHALL CONFORM TO ASTM A307.
3. ALL STEEL MATERIAL SHALL BE GALVANIZED.

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TIMBER BOLLARDS (REMOVABLE AND FIXED)

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TOWN OF YARROW POINT DATE

DWG. NO. **RD-16**

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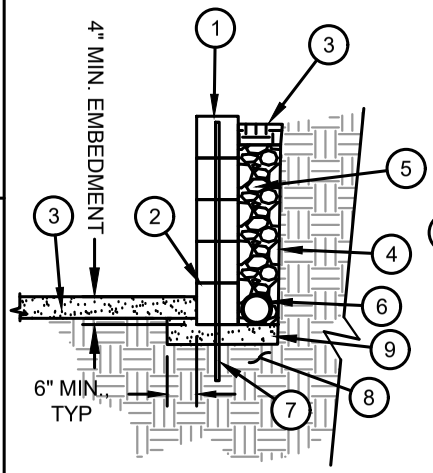
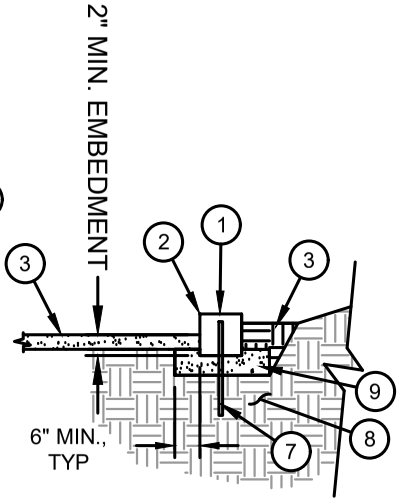
TIMBER EDGING



STACKED TIMBER

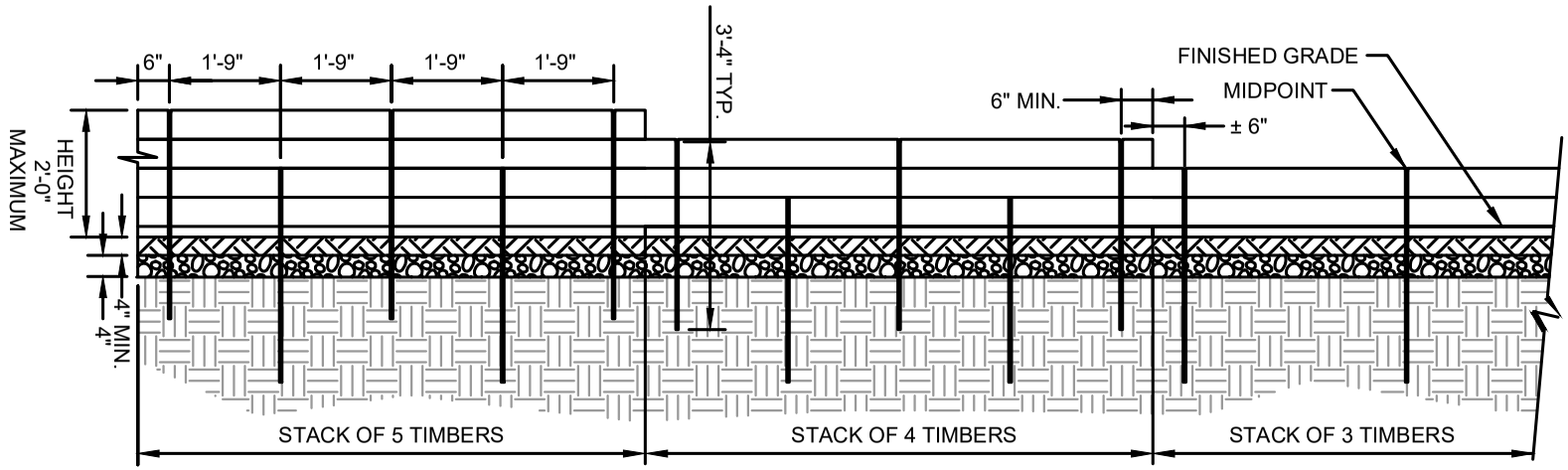


SINGLE TIMBER

1. COUNTERSINK REBAR AND FILL HOLE WITH ACRYLIC CAULK, 1/2" DEEP
2. LANDSCAPE TIMBER (5 1/2" x 5 1/2")
3. RESTORE TO PRE-CONSTRUCTION CONDITIONS.
4. FILTER GEOTEXTILE FABRIC SHALL BE MODERATE SURVIVABILITY CLASS A PER SECTION 9-33.1 OF THE WSDOT STANDARD SPECIFICATIONS.
5. GRAVEL BACKFILL FOR DRAINS
6. PERFORATED 4" DRAIN PIPE, DAYLIGHT AT END OF TIMBER EDGING
7. #5 REBAR, 3'-4" LONG
8. COMPACTED SUBGRADE
9. 4" CSTC LEVELING PAD

NOTES:

1. HEIGHT OF TIMBER EDGE WILL VARY BASED ON FIELD CONDITIONS, MAINTAIN 2" MIN. ABOVE FINISH GRADE AT BACK OF TIMBER EDGING.
2. PLACE 5 REBAR AS SHOWN WHEN 4 OR MORE TIMBERS ARE STACKED. PLACE 3 REBAR WHEN 1-3 TIMBERS ARE STACKED.
3. STAGGER VERTICAL JOINTS, MIN. 6" OVERLAP BETWEEN LEVELS.
4. ALL DEPTHS ARE COMPACTED DEPTHS.



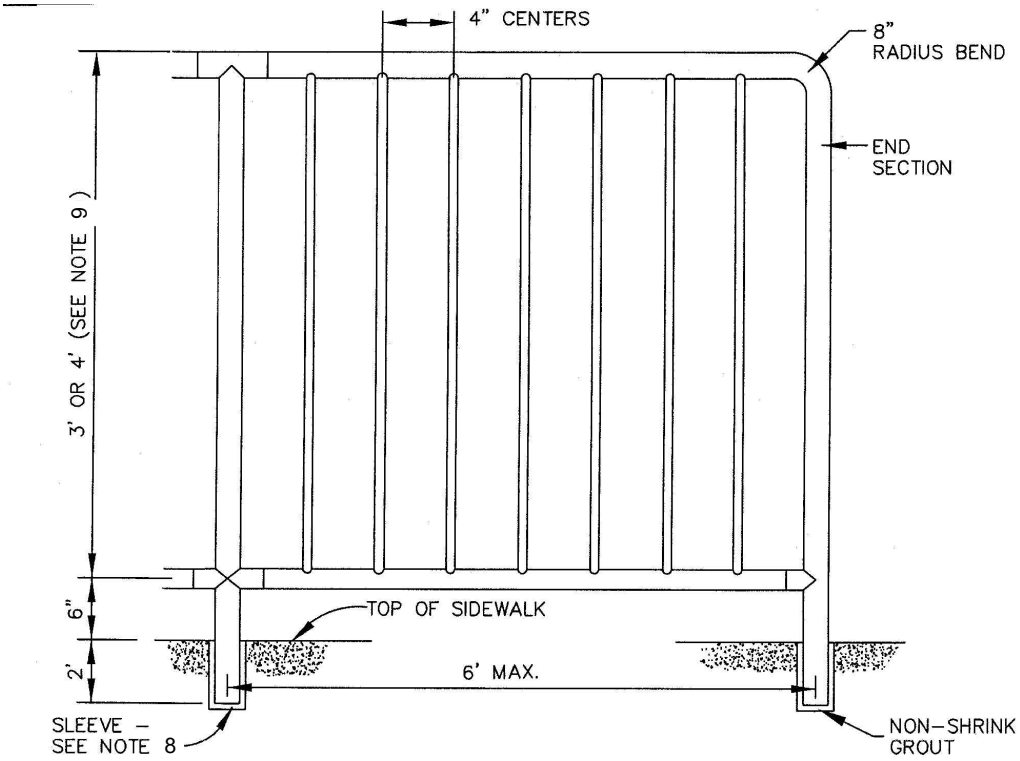
APPROVED:

TOWN OF YARROW POINT

DATE

DWG. NO.

RD-17



PIPE SCHEDULE

(ALL DIMENSIONS O.D.)

PANEL HEIGHT	TOP RAIL/POST	BOTTOM RAIL	BALUSTER
3'	1.90"	1.90"	.840"
4'	2.875"	2.375"	.840"

NOTES:

1. RAILING SHALL BE ALUMINUM PIPE RAIL OR APPROVED EQUAL. INSTALLATION SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.
2. SHOP DRAWINGS OF RAILING SHALL BE SUBMITTED FOR APPROVAL SHOWING COMPLETE DIMENSIONS AND DETAILS OF FABRICATION AND INCLUDING AN INSTALLATION DIAGRAM. MATERIALS BEING USED SHALL BE SPECIFIED IN THE SHOP DRAWINGS.
3. ALL ALUMINUM PARTS SHALL BE GIVEN A CLEAR ANODIC COATING AT LEAST 0.0006 INCH THICK AND BE HOT WATER SEALED AND SHALL HAVE A UNIFORM FINISH.
4. CUTTING SHALL BE DONE BY SAWING OR MILLING AND ALL CUTS SHALL BE TRUE AND SMOOTH, FLAME CUTTING WILL NOT BE PERMITTED.
5. PIPE RAILING, PIPE BALUSTERS AND PIPE RAILING SPLICES SHALL BE ADEQUATELY WRAPPED TO ENSURE SURFACE'S PROTECTION DURING HANDLING AND TRANSPORTATION TO THE JOB SITE.
6. WELDING OF ALUMINUM SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. ALLOW FOR EXPANSION AT APPROXIMATELY EVERY FOURTH POST.
8. RAILS, POSTS AND FORMED ELBOWS SHALL BE A.S.T.M. B-241 OR B-429 ALLOY, 6063-T6 SCHEDULE 40 (STD. PIPE). BRACKETS, END CAPS AND OTHER FITTINGS SHALL BE A.S.T.M. 6063-T5. SPLICES AND REINFORCING SLEEVES SHALL BE DRAWN ALUMINUM TUBING 6063-T832. SLEEVE I.D. SHALL BE 1" GREATER THAN POST O.D.
9. PANEL HEIGHT: 3 FEET FOR PEDESTRIAN USES \ 4 FEET FOR COMBINED BICYCLE AND PEDESTRIAN USES.

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METAL HANDRAIL DETAIL

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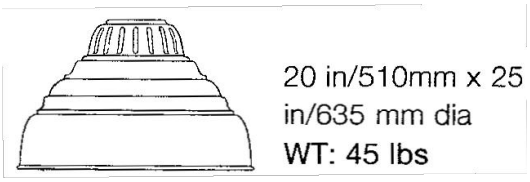
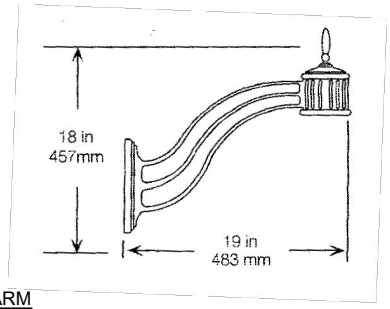
RD-18



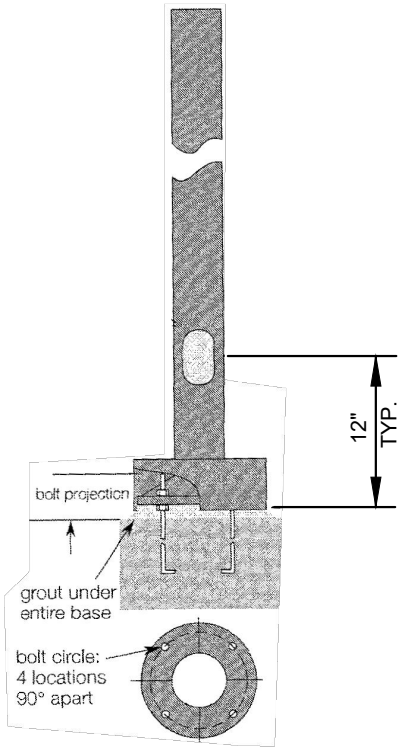
LUMINAIRE
ARCHITECTURAL AREA LIGHTING PENDANT LUMINAIRE
PROMENADE SERIES, TYPE III DISTRIBUTION
INTERNAL HOUSE SIDE SHIELD
100 WATT HPS, 120 VOLT HPF BALLAST
LUMINAIRE PAINTED AAL DGN
PRM2 H3 HORIZ. LAMP, FLAT GLASS LENS, IES FULL CUTOFF,
TYPE III REFLECTOR, ARM MOUNT

CATALOG NUMBER -- PRM2-H3-HSS-100HPS-120-DGN

LAMP
CERAMALUX HIGH PRESSURE SODIUM LAMP - 100 WATT
MANUFACTURER: PHILIPS LIGHTING
CATALOG NO.: C100554/M
DESCRIPTION: CLEAR; ANSI CODE/ BALLAST S54S; INITIAL INTENSITY 9500 LUMEN; COLOR RENDERING INDEX 21' COLOR TEMPERATURE 2100 K; OPERATING POSITION UNIVERSAL; OVERALL LENGTH 5 7/16 INCH; LIFE 24000; APPLICATION GENERAL LIGHTING; STANDARD PACKAGE 12; CERAMALUX[T] BRAND



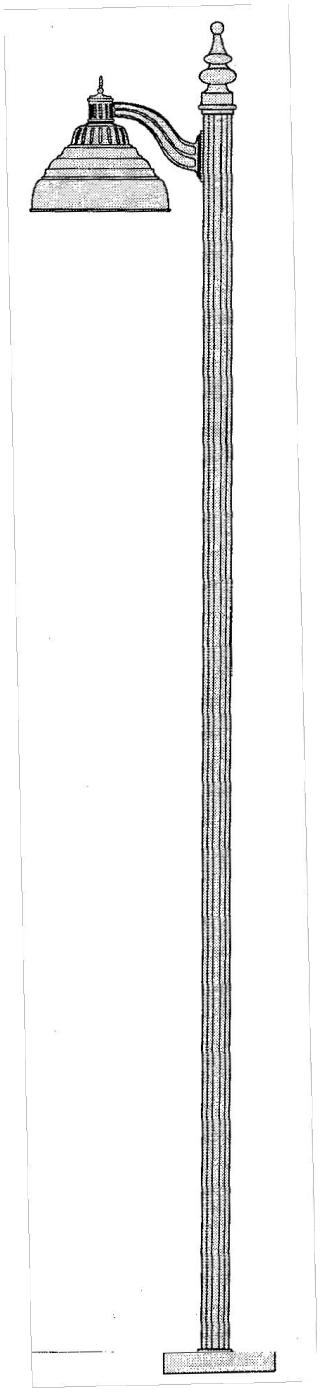
ARM
ARCHITECTURAL AREA LIGHTING
LUMINAIRE ARM FOR PENDANT MOUNTED LUMINAIRE
ARM PAINTED ALL DGN
CATALOG NUMBER -- TRA5D-DGN



POLE
GARMIRE IRON STEEL POLE PR5
25' TALL - ROUND, TAPERED, GALVANIZED
ANCHOR BASE STEEL POLE
12.5" BASE DIA. AND 5" POLE DIA.
FINISH PAINT AAL DGN OVER GALVANIZE (INCLUDING CAP)
POLE DRILLED FOR AAL TRA5D ARM
POLE TOP CAP W/ PE RECEPTACLE INSTALLED
CATALOG NUMBER GRTS25-HDG/AAL "DGN"

SET OF 4 ANCHOR BOLTS 1"x36"x6"x6" A307/GALV

http://www.aal.net/products/promenade8482_prm2



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STREET LIGHT STANDARD
DETAIL 1 OF 3

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.
RD-19a

HOUSING

The ballast housing shall be a one piece, high strength casting with an integral heat sink for the ballast assembly. Housing shall be A356 cast free of any porosity, foreign materials or cosmetic fillers. The hood shall be spun aluminum welded circumferentially to the ballast housing. The housing shall have an inner rolled flange to support the door frame. The door frame shall be an aluminum casting, hinged to the housing. The door frame shall be sealed to the housing with a molded silicone gasket and be secured with four captive screws.The lens on the PRM2 and PRM3 shall be clear, tempered glass sealed to the door frame with a silicone gasket. Vertical lamp fixture shall have a sag glass lens, the horizontal lamp fixture shall have a flat glass lens. The optional drop lens on the PRM4 shall be molded, optical grade DR acrylic. All internal and external hardware is stainless steel.

REFLECTOR MODULE

The optical assembly shall consist of an die cast aluminum housing, sealed with a silicone gasket to prevent dust, insect or moisture contamination. The reflector module shall consist of segmented, specular and semi-specular Alzak® panels precisely formed and positioned within the housing and rotatable on ninety degree increments for proper field positioning. Reflectors shall meet the ANSI-IES standard for full cutoff in horizontal models.

ELECTRICAL

All electrical components shall be U.L. recognized. Ballasts shall be high power factor rated for -30°C starting. The ballast assembly plate shall be mounted to the cast housing for maximum heat dissipation. Medium and mogul base porcelain sockets shall be pulse rated. Sockets for horizontal metal halide lamps are pin orientated and include a lamp stabilizer. The ballast assembly shall be installed and prewired in the fixture. High output fluorescent lamps shall be powered by electronic ballast and shall be rated for a minimum starting temperature of -18° C. (PRM3 only)

MOUNTING

The fixture shall be welded to the cast arm for mounting the TRA5 and TRA6 arm.

Wall mounting the WMA35 or WMA36: the fixture shall be welded to the cast arm.

Arm or wall mounting other AAL arms: The fixture shall attach to a transition casting that is welded to the arm. The transition piece shall attach to the fixture with three stainless steel 1/4-20 bolts and sealed with a silicone gasket.

Post top fitter: the cast fitter shall be welded to the yoke and slips over a 4 in/100 mm O.D. pole for PRM3 or a 5 in/127 mm O.D. pole for PRM2 & PRM4 and secured with six stainless steel set screws.

TOOL-LESS RELAMPING

The lens door frame of the fixture shall hinge down for relamping. Four captive screws shall be loosened to open the fixture for relamping (PRM2 & PRM4). One captive screw shall be loosened to open the fixture on the PRM3.

FINISH

Fixture finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

EISA COMPLIANCE

AAL is committed to complying with U.S. EISA requirements. All applicable products manufactured for sale in the United States after January 1, 2009, meet EISA requirements.

CERTIFICATION

Fixtures shall be listed with ETL for outdoor, wet location use, UL 1598 and Canadian CSA C22.2 no.250 IP = 54.

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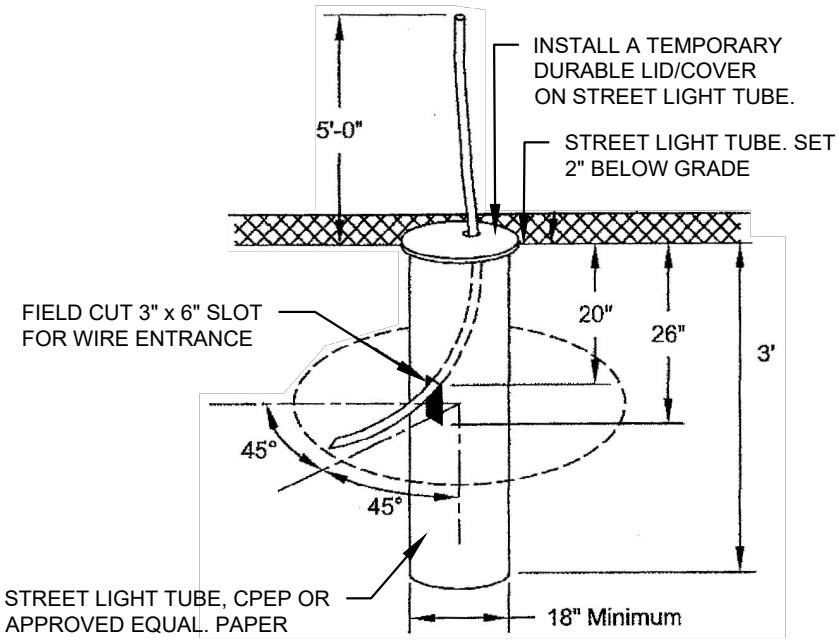
STREET LIGHT STANDARD
DETAIL 2 OF 3

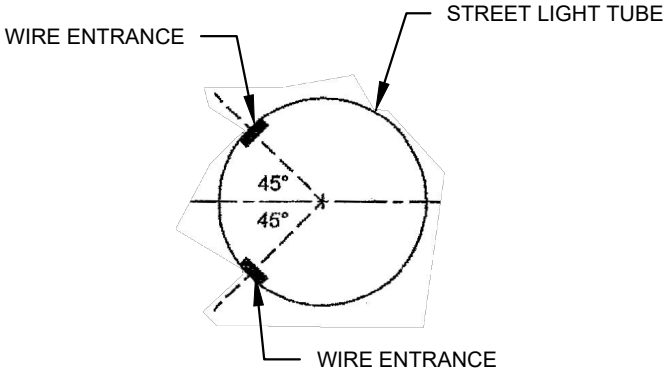
APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.

RD-19b





POSITION 3"x6" WIRE ENTRANCE SLOT 45 DEGREES LEFT OR RIGHT FROM A LINE PERPENDICULAR TO THE ROADWAY THROUGH THE CENTER OF THE TUBE.

PLAN VIEW
STREET LIGHT TUBE

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STREET LIGHT STANDARD
DETAIL 3 OF 3

APPROVED:

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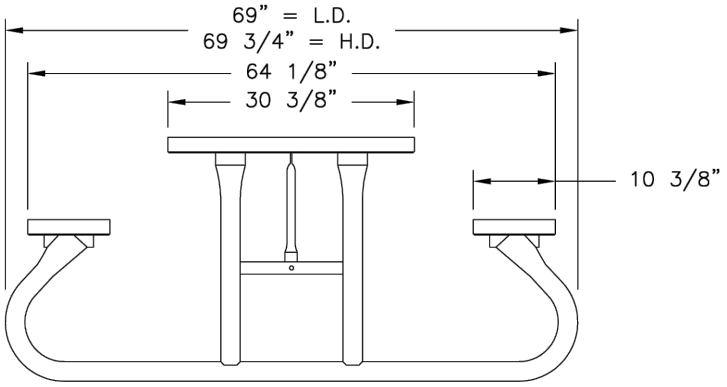
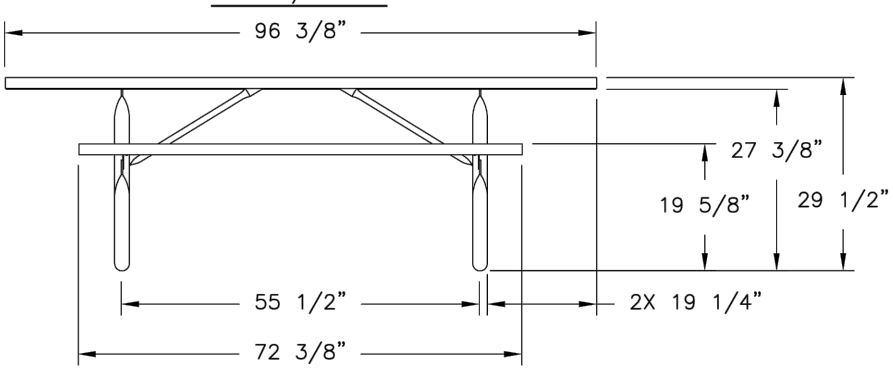
RD-19c

ALL MODELS W/ SEATS



SG115P/SG115D



specifications:

NOTE: We reserve the right to change specifications without notice.

Heat fused poly–vinyl coating, finished on inner–metal structure, to an approximate 3/16" thickness. Framework assemblies are finished with powder coating; electrostatically applied and oven cured according to powder manufacturer's specifications. Fasteners are stainless steel to resist corrosion.

TABLE FRAMES:
Main supports are constructed of 2 3/8" od x 13 gage and 1 5/8" od x 14 gage structural steel tubing. Cross braces are 1" od x 15 gage structural steel tubing. Mounting brackets on legs are 10 gage x 2 7/8" x 6" sheet steel.

TOP & SEATS:
Top and seats use fabricated 3/4–#9 expanded steel mesh and 12 gage sheet metal for perforated. Framing on the 8', 6' and 4' top and 8' and 6' seats are 10 gage mitered angles 3/4" x 1 3/4". The 4' seats use 14 gage mitered angles 3/4" x 1 3/4". Top's center support brace is 1/8" x 1 1/2" strip steel. Top and seat mounting brackets are 1/4" x 1 1/2" steel flat bar.

GENERAL:
10' picnic table ground space requirements are 69 3/4" x 120 3/8". 8' handicap picnic table ground space requirements: 69 3/4" X 96 3/8". 8' picnic table ground space requirements are 69 3/4" x 96 3/8". 6' picnic table ground space requirements are 69 3/4" X 72 3/8". 4' picnic table ground space requirements are 69 3/4" x 48 3/8". Table tops are 30 3/8" wide and 29 1/2" to the top of the tables. Seats are 10 3/8" wide and 19 5/8" to top of seat. Corner radius is 3" to the outside.
8' utility table ground space requirements are 30 3/8" x 96 3/8". 6' utility table ground space requirements are 30 3/8" x 72 3/8". 6' and 8' utility table tops are 30 3/8" wide and 29 1/2" to the top of the table. Corner radius is 3" to the outside.

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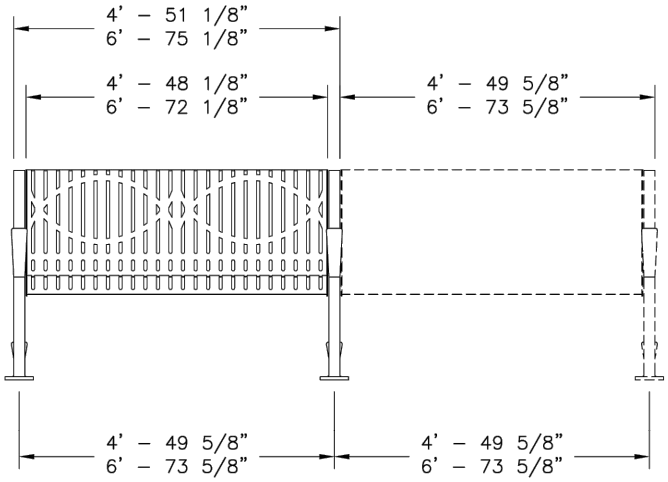
PICNIC TABLE STANDARD

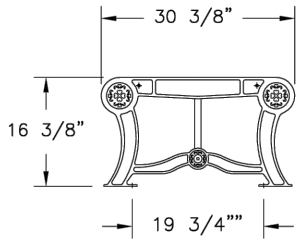
APPROVED:

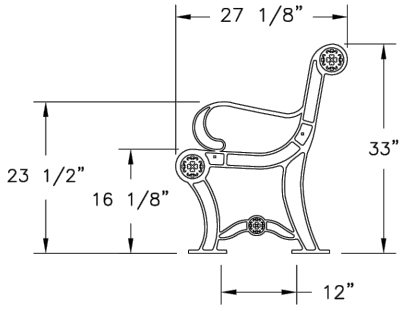
TOWN OF YARROW POINT DATE

DWG. NO.

RD-20







specifications:

NOTE: We reserve the right to change specifications without notice.

Heat fused poly–vinyl coating, finished on inner–metal structure, to an approximate 3/16" thickness. Framework assemblies are finished with powder coating; electrostatically applied and oven cured according to powder manufacturer's specifications. Fasteners are stainless steel to resist corrosion.

BENCH FRAME:
Main support legs are #2 cast aluminum. Web width is 5/16" and leg width is 1 1/2". Foot pads are 3" x 5".

BENCH SEAT:
Expanded seat uses 3/4" #9 expanded metal. Welded wire seat uses 5 gage welded wire. Rib is 10 gage and perforated is 12 gage sheet steel. Both types of fabricated metals and sheet metals are machine rolled, forming the seat's contour shape. The rod bench is 1/2" steel rod and the slats are 1/4" x 2 1/4" flat bar. The bench's frame/mounting brackets are 10 gage sheet steel. Support braces, adding support to the bench's contour shape, are 1/4" x 1 1/4" flat bar steel.

GENERAL:
4' Estate bench ground space requirements are 27 1/8" x 51 1/8" for a single unit. With one add–on is 27 1/8" x 100 3/4" total. For each additional add–on, add 49 5/8". The bench seat is 48 1/8" long x 25 1/2" wide and 15 7/8" to the lowest part in the bench's seat.

6' Estate bench ground space requirements are 27 1/8" x 75 1/8" for a single unit. With one add–on is 27 1/8" x 148 3/4" total. For each additional add–on, add 73 5/8". The bench seat is 72 1/8" long x 25 1/2" wide and 15 7/8" to the lowest part in the bench's seat.

4' Estate low profile bench ground space requirements are 30 3/8" x 51 5/8" for a single unit. With one add–on is 30 3/8" x 101 1/2" total. For each additional expanded metal, rib or perforated add–on, add 49 7/8", welded wire add 50 1/8". The expanded metal, rib and perforated bench seat is 48 1/8" long, welded wire is 48 3/8" long x 30 3/8" wide and 16 3/8" to the top of the seat.

6' Estate low profile bench ground space requirements: 30 3/8" x 75 1/8" for a single unit. With one add–on is 30 3/8" X 149 1/8" total. For each additional add–on, add 73 5/8". The bench seat is 72 1/8" long x 30 3/8" wide and 16 3/8" to the top of the seat.

The Memorial Plaque consists of 304 brushed stainless steel.

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MEMORIAL BENCH STANDARD

APPROVED:

TOWN OF YARROW POINT DATE

DWG. NO.
RD-21