

SECTION 02200

PRELIMINARY SITEWORK

PART 1 - GENERAL

1.01 PROTECTION

A. Reference Points

1. Establish and maintain at least 2 benchmarks on the site referenced to the datum indicated on the project site survey. All vertical dimensions shall be checked from these bench marks.
2. Protect and maintain all bench marks, monuments and reference points. Replace if disturbed or destroyed. If found at variance with the drawings, notify the Architect before proceeding with layout work.

B. Existing Trees to Remain

1. All trees shall be retained except in the area disturbed by the work and as designated by the owner and shall be protected throughout period of construction.
2. Low-hanging branches on trees to be retained shall not be cut without permission of the Architect. All cuts or accidental injuries to the bark or trunk shall be immediately cleaned, trimmed, and painted with protective tree wound and sealing compound.
3. Trees and shrubs, indicated to be retained, which are damaged beyond repair by construction operations shall be replaced to the approval of the Architect at no additional cost.
4. Protect structures, utilities, sidewalks, pavements and other facilities from damage.
 - a) Locate, stake or otherwise visible mark, all underground utilities. Contact and coordinate with owners of all utilities before commencing operations.
 - b) In the event of damage, make repairs or replacements, or pay all cost necessary for repair or replacement necessary to the approval of the Architect, Utility or other improvement Owner.

C. Unless otherwise shown on the plans or specified herein, all trees outside limits of construction shall remain.

D. Provide barricade between construction phases to protect patrons and workers, while allowing access to the building.

1.02 PROJECT SITE/LIMITS OF WORK

A. Prior to commencing Sitework, the Contractor shall stake out all proposed work to define limits of new construction and shall mark the clearing perimeter. The Contractor shall notify the Architect in writing when these limits have been marked. Clearing shall not commence until the Architect has approved these limits.

B. Contractor shall provide Surface Water Control, Clearing and Grubbing, and Stripping and Stockpiling of Topsoil.

PART 2 - PRODUCTS

2.01 Not used in this Section.

PART 3 - EXECUTION

3.01 LAYOUT

- A. Protect and maintain bench marks throughout execution of this work.
- B. Stake building and site improvements relative to reference lines, property lines, easements, and right-of-way.

3.02 DEMOLITION

- A. Demolish and remove existing features as specified, as well as miscellaneous debris from within the limits of construction.

3.03 CLEARING AND GRUBBING

- A. Fell and cut up all standing trees designated to be removed. In building areas remove trees and shrubs, including their entire root systems which occur within building area and within an area 5'-0" adjacent to building area.
- B. In site cut and fill areas, remove shrubs and shrub root systems and trees (except as noted below), including tree root system down to a point at least 24" below finish grade.
- C. Remove all downed timber, logs, snags, brush and rubbish from the site.

3.04 DEBRIS

- A. Clear site of existing broken concrete, stones, bricks, glass, and debris, and haul away from site for legal disposal.
- B. Off-site legal disposal area shall be the responsibility of the Contractor.
- C. Burning of debris on site shall not be allowed.

3.05 STRIPPING AND STOCKPILING OF TOPSOIL

- A. Areas to be stripped shall first be scraped clean of all brush, weeds, grass, roots, wood, glass, stones, broken concrete, brick and concrete block. Topsoil shall be free from subsoil, debris, and stones larger than 2-inches in diameter.
- B. Strip topsoil to its entire depth from within graded areas.
- C. Stockpile topsoil in on-site locations where it will not interfere with building or paving construction, site or utility operations, or adjacent facilities and functions. Materials stockpiled shall be placed in a manner to afford drainage. Protect against erosion using bales of hay placed continuously around perimeter.
- D. Topsoil shall be re-spread outward from the pavement areas at the close of the job.

END OF SECTION 02200.

SECTION 02270

SLOPE PROTECTION AND EROSION CONTROL

PART 1 - GENERAL

1.01 EXTENT OF WORK

- A. Erosion control shall be employed during construction period and shall include all necessary temporary measures required to prevent soil erosion from the site until permanent erosion control measures are installed. Work shall be accomplished through, but not limited to, use of berms, dikes, dams, sediment barriers, silt fences, hay bales, temporary grasses, mulching and slope drains.
- B. Erosion control measures described herein shall be continued until such time as permanent planting and restoration of natural areas is effectively in control of erosion from project site.
- C. The extent of the work covered in this section shall conform to this specification and the plans, details and notes included in the project Drawings.
- D. Erosion control measures indicated on the drawings shall be considered minimum requirements. Regulatory requirements and authorities shall govern over drawings and if directed by the governing authorities additional erosion control measures shall be provided at no additional cost.

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM).
- B. Erosion control measures for construction shall conform to the practices, regulations and ordinances of the Local Authority, Florida Department of Transportation (FDOT), and Federal regulations.

PART 2 - PRODUCTS

2.01 FILTER FABRIC FOR SILT FENCES

- A. Filter fabric for silt fences shall be pervious sheet of synthetic polymer filaments forming a stable network so that fibers retain their relative positions. Filter fabric shall be of type recommended by its manufacturer for intended application and shall meet the minimum properties indicated on the drawings.
- B. Silt fence shall be constructed in accordance with Florida DOT Standards and as indicated on the drawings.
- C. The manufacturer shall have either an approved color mark yarn in the fabric or label the fabricated silt fence with both the manufacturer and fabric name every 100 feet.

2.02 FILTER FABRIC FOR RIP RAP AND STONE SUPPORT

- A. Filter fabric shall be an appropriate woven geotextile fabric conforming to Florida Department of Transportation Standard Specifications.

2.03 HAY BALES

- A. Hay bales shall be well compacted straw, standard size, wire bound. Synthetic hay bales shall be in accordance with FDOT Design Standard Index 102.

2.04 RIP RAP AND FILTER STONE

- A. Rip rap and filter stone shall conform to the requirements of Florida Department of Transportation Standard Specifications.

2.05 GRASSING AND MULCHING

- A. Planting species and rates shall be in accordance with FDOT Standards and Specifications.
- B. Temporary grass shall be quick growing species suitable to area providing a temporary cover which will not later compete with grasses sown for permanent cover.
- C. Areas to be mulched need not be to finished grade. Temporary mulching may be applied to slopes as steep as 2:1, horizontal to vertical, using a tractor to embed mulch into slope.
- D. Landscape Plans shall take precedent over directions in this section.

PART 3 - EXECUTION

3.01 GENERAL

- A. Temporary erosion control shall be directed toward and have the purpose of controlling soil erosion at its potential source. Downstream sediment entrapment measures may be employed, but only as a backup to primary control at the source.
- B. A continuing program of installation and maintenance of sediment control measures shall be employed during construction period.
- C. The contractor shall limit the surface area of erodible earth materials exposed by clearing and grubbing, the surface area of erodible earth exposed by excavation and backfill operations and provide immediate permanent or temporary erosion and pollution control measures to prevent contamination of adjacent streams or other water courses.
- D. Clearing and grubbing operations shall be so scheduled and performed that grading operations and permanent erosion control features can immediately follow thereafter, if the project conditions permit, otherwise temporary erosion control measures may be required between successive construction stages. Under no conditions shall surface areas of erodible earth material exposed at one time by clearing and grubbing exceed 20,000 sq. ft.
- E. Limit the area of excavation, trenching, pipe laying operations in progress commensurate with contractor's capability and progress in keeping finish grading, mulching, seeding and other permanent and/or temporary measures current with accepted schedule. In general, construction operations shall not advance more than 800 lineal feet ahead of required erosion control measures and installation.

3.02 TEMPORARY EROSION CONTROL DURING CONSTRUCTION

- A. Temporary Grassing and Mulching
 - 1. Where staged construction or other conditions not controlled by the Contractor prohibit the completion in a continuous manner, the Contractor shall apply temporary seeding or temporary mulch to an erodible area as soon as practical, but not longer than 14 days after disturbance.
- B. Silt Fences
 - 1. Temporary silt fences shall be located at all points where surface water can leave the construction area having bypassed a silt trap if the source area is subject to soil erosion.
 - 2. Silt fences shall be constructed to remove sediments from flowing water through filtration and sedimentation.
 - 3. Silt fences shall be arranged to create ponding behind them. Provisions shall be made for removing accumulated sediments and maintaining ponding capacity.
 - 4. Silt fences shall be removed and the area restored when permanent erosion control is effective.

- C. Storm Drain Outlet Protection
 - 1. Stone size used in the riprap apron shall conform to the requirements indicated on the drawings.
 - 2. Provide filter fabric or a filter blanket between the soil foundation and the riprap apron.
- D. Rock Filter Dams
 - 1. Provide filter fabric between the soil foundation and the rip rap apron.
 - 2. Stone shall be graded aggregate with size varying uniformly between $\frac{3}{4}$ inch and 6 inches.
- E. Grading Operations
 - 1. Grading operations shall be scheduled so that ground surface will be disturbed for the shortest possible time before permanent construction is installed. Large areas shall be maintained as flat as possible to minimize soil transport through surface flow.
 - 2. Wherever steeper slopes or abrupt changes in grade are required, a diversion or berm shall be constructed at the top of slope to cause surface water to flow along the diversion to a control point to be transported downslope in a slope drain. In no case shall surface water be allowed to flow uncontrolled down slopes.

3.03 RUN-OFF EROSION AND SEDIMENTATION CONTROLS

- A. During construction, route run-off through sedimentation barriers and check dams as practical.
- B. Contractor shall maintain sedimentation devices in functional condition. Sedimentation barriers and check dams shall be cleaned out as required to maintain at least 60% of their capacity at all times. Defective materials in barriers and check dams shall be replaced.
- C. Contractor shall establish sedimentation barriers at the toe of slopes under construction. These barriers may be relocated and reused after permanent slope stabilization becomes established. As they are relocated, any defective materials in barrier shall be replaced. In addition, all debris and silt at previous location will be removed.
- D. A 6" minimum thickness of crushed stone pad shall be located at all construction exits from site to public streets. All construction vehicles leaving the construction site shall have mud cleaned from their tires at these points to protect public streets from the transportation of sediment from site.

3.04 CLEAN-UP AND REMOVAL

- A. At the time that permanent erosion control is effective, temporary devices and their accumulated sediments may be removed.
- B. Silts and deposits removed from control barriers shall be placed in eroded areas and shall be replanted or removed from the site for legal disposal.

END OF SECTION 02270.

SECTION 02650

ASPHALTIC CONCRETE PAVING

PART 1 - GENERAL

- 1.01 SECTION INCLUDES
 - A. Asphaltic concrete paving
 - B. Graded Aggregate Base Course
 - C. Bituminous tack and prime coats
 - D. Pavement-marking paint
 - E. Concrete wheel stops

- 1.02 REFERENCED DOCUMENTS
 - A. Florida Department of Transportation's Standard Specifications for Road and Bridge Construction, latest edition.

- 1.03 QUALITY ASSURANCE
 - A. Codes and Standards:
 - 1. Comply with Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition.
 - B. Provide material furnished by a bulk asphaltic concrete producer regularly engaged in the production of hot-mix, hot-laid asphaltic concrete paving materials.

- 1.04 SUBMITTALS
 - A. Certificates: Provide copies of current FDOT approvals of sources for the limerock material for base course, and current FDOT approvals for compliance with the specified requirements.
 - B. Job-mix formula: Prior to production of any asphaltic paving mixture, the Contractor shall submit a mix design to the Engineer at least two weeks before the scheduled start of production. The information furnished shall be as described in Section 330 of the FDOT Standard Specifications.
 - C. Material Certificates: Provide copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with, or exceeds, specified requirements for the following materials:
 - 1. Bituminous material, coarse and fine aggregate and mineral filler for asphalt concrete.
 - D. Asphaltic Concrete Mix Plant Certificate: Provide copy of FDOT approval of Asphaltic concrete mix plant for compliance with the specified requirements.
 - E. Test Reports: Submit reports to Contracting Officer for all tests as herein specified, to include surface materials.
 - 1. Specific gravity test of asphalt
 - 2. Coarse aggregate tests
 - 3. Weight of slag test
 - 4. Percent of crushed pieces in gravel
 - 5. Fine aggregate tests
 - 6. Specific gravity of mineral filler
 - 7. Bituminous mixture tests
 - F. Field Test Reports
 - 1. Aggregates tests
 - 2. Bituminous mix tests
 - 3. Pavement courses

- 1.05 DELIVERY, STORAGE AND HANDLING
 - A. Deliver manufactured products in manufacturer's original, unopened, and

- undamaged containers with labels intact and legible.
- B. Store and handle manufactured products to prevent damage and deterioration.
- C. Inspect materials delivered to the site for damage and store with a minimum of handling. Store aggregates in such a manner as to prevent segregation, contamination, or intermixing of the different aggregate sizes.

1.06 PROJECT CONDITIONS

- A. Construct asphalt concrete surface course when atmospheric temperature is above 40 degrees F (4 degrees C) and when base is dry.
- B. Grade control: Establish and maintain required lines and elevations, including crown, inverted crown, and cross-slopes, for each course during paving operations.
- C. Provide temporary barricades and warning lights as required for protection of project work and public safety.
- D. Protect adjacent work from damage, soiling and staining during paving operations.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Use locally available, State Department of Transportation approved materials and gradations which exhibit a satisfactory record of previous installations.
- B. Limerock Material: Limerock material for limerock base course shall be supplied from an FDOT approved source and shall conform to the requirements of FDOT Section 911.

2.02 LIMEROCK BASE

- A. Limerock base shall be constructed in accordance with the requirements of FDOT Section 200.
- B. The limerock base course shall be compacted to a Limerock Bearing Ratio of 100. The Limerock Bearing Ratio (LBR) shall be based on limerock material specimens obtained on this specific project site. Non project specific LBR tests shall not be used.
- C. Remove loose and foreign material from compacted foundation course immediately before application of surface materials.

2.03 AGGREGATES

- A. Grade and proportion aggregates and filler so that combined mineral aggregate conforms to specified grading.
- B. Course aggregate shall be supplied from FDOT approved sources and shall conform to the requirements of FDOT Section 902 and the referenced provisions of Section 331 for aggregates to be used in asphaltic concrete.
- C. Fine aggregate shall be supplied from FDOT approved sources and shall conform to the requirements of FDOT Section 902 and the referenced provisions of Section 331 for fine aggregates to be used in asphaltic concrete.
- D. Mineral filler shall conform to the requirements of FDOT Section 917 and the referenced provisions of Section 331.

2.04 ASPHALTIC CONCRETE

- A. General: Asphaltic Concrete shall be Type SP-9.5 or SP12.5 as indicated on the plans.
- B. Type SP-9.5 or SP12.5 Asphaltic Concrete: Asphaltic concrete shall conform with the requirements of FDOT Section 334 and the Sections referenced therein.
- C. Bituminous material shall conform to FDOT Section 916-1 for Asphalt Cement Viscosity Grade AC-20 or AC-30 with the exception that material failing to meet the viscosity requirements will be rejected.

- 2.05 AUXILIARY MATERIALS
 - A. Pavement Markings shall be thermoplastic in accordance with FDOT Standards and Specifications.
 - B. Wheel Stops: Precast, air-entrained concrete, 4000-psi minimum compressive strength, approximately 6 inches high, 9 inches wide, and 72 inches long in accordance with FDOT Standard Index 300.
 - C. Signage shall be in accordance with the FDOT Standard Index and Manual for Uniform Traffic Control Devices (MUTCD).

PART 3 - EXECUTION

- 3.01 PREPARATION
 - A. Refer to FDOT Standard Specification 330.
- 3.02 PLACING MIX
 - A. Refer to FDOT Standard Specification 330.
- 3.03 COMPACTING MIXTURE
 - A. Refer to FDOT Standard Specification 330.
- 3.04 PLACING ASPHALT PAVEMENT
 - A. Install Work in accordance with Florida D.O.T. Standard Specification, Section 330.
 - B. Allow curing time for primer or tack coat prior to placing asphalt in accordance with FDOT Standards.
 - C. Place to compacted thickness indicated.
 - D. Adjust manhole frames and covers to correct position and elevation.
 - E. Compact pavement by rolling. Do not displace or extrude pavement from position. Hand compact in areas inaccessible to rolling equipment.
 - F. Develop rolling with consecutive passes to achieve even and smooth finish, without roller marks.
- 3.05 TRAFFIC AND LANE MARKINGS
 - A. Waiting Period: Allow paving to cure per FDOT Standards before starting pavement marking.
 - B. Cleaning: Sweep and clean surface to eliminate material and dust.
 - C. Striping: Striping parking lanes shall be 4-inches in width.
 - D. Do not apply traffic and lane marking paint until layout and placement has been verified with the Owner.
 - E. Apply paint with mechanical equipment to produce uniform straight edges. Apply in 2 coats at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.
- 3.06 FIELD QUALITY CONTROL
 - A. Testing Agency: The Contractor will provide an Independent Third Party quality control services and perform field inspections, tests, and to prepare test reports.
 - 1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from specified requirements.
 - B. Quality Control Testing During Construction: Allow testing service to inspect, test and approve limerock base before further construction work is performed as indicated herein.
 - C. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.
 - D. Testing:

1. The limerock base shall be tested for field density with one test taken every 7,500 square feet or portion thereof at locations designated by the Contracting Officer.
2. Field density checks shall be performed by either the Sand Cone Method ASTM D 1556 or the Nuclear Density Method ASTM D 2922.
3. The asphaltic concrete finished surface shall be checked for irregularities according to FDOT Section 330-12.3 with the exception of references to payments or pay quantities. The pavement thickness shall be checked in accordance with FDOT section 330-14 and 330-15 with the exception of references to payments or pay quantities.
4. At the option of the Engineer, stability of asphaltic concrete determined according to ASTM D 1559, extraction tests for asphaltic concrete according to ASTM D 1856 or ASTM D 2172, and in-place density tests of pavement according to ASTM D 2950 shall be performed.
5. If in the opinion of the Engineer, based on testing service reports and inspection, base and asphaltic concrete surface courses which have been placed do not meet specified requirements, provide corrections and additional testing at no additional expense.

3.07 PROTECTION

- A. Refer to FDOT Standard Specifications Section 330-13 for protection of finished surface.

3.08 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from paving operations.
- B. Sweep pavement and wash free of stains, discolorations, dirt, and other foreign material immediately prior to final acceptance.

3.09 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury for 7 days.

END OF SECTION 02650.

SECTION 02660

CONCRETE CURB, WALKS AND PAVING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work included: Furnish all materials, forms and subgrade preparation for the CONCRETE CURB, WALKS AND PAVING as specified herein, shown on the drawings and as needed for a complete and proper installation, including but not necessarily limited to:
1. Final preparation of subgrade;
 2. Setting forms;
 3. Placing Concrete;
 4. Finishing Concrete;
 5. Curing and protection of finished surfaces.

1.02 QUALITY ASSURANCE

- A. Codes and standards: Comply with standards specified in this Section.
- B. Qualifications of workmen:
1. Provide at least one person who shall be thoroughly trained and experienced in the skills required, who shall be completely familiar with the design and application of work described for this Section, and who shall be present at all times during progress of the work of this Section and shall direct all work performed under this Section.
 2. For actual placing, finishing and curing and operation of the required equipment, use only personnel who are thoroughly trained and experienced in the skills required.

1.03 SUBMITTALS

- A. General: N/A
- B. Test Reports: Submit test reports showing the 28 day compressive strength of concrete used at jobsite is at minimum 3000 PSI.

1.04 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect material of this Section before, during and after installation and to protect installed Work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Engineer at no additional cost to the Owner.

1.05 JOB CONDITIONS

- A. Maintain access for vehicular and pedestrian traffic as required for other construction activities. Utilize flagmen, barricades, warning signs and lights as required.
- B. Dust control:
1. Use all means necessary to control dust on and near the work and on and near all off-site borrow areas, if such dust is caused by the Contractor's operations during performance of the Work or if resulting from the condition in which the Contractor leaves the site.
 2. Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors and concurrent performance of other Work on the Site.
- C. Protection:
1. Locate, stake or otherwise mark all underground utilities. Contact and

- coordinate with Owners of all utilities before commencing operations.
2. Obtain approval for access to City, County or State owned streets and comply with all requirements necessary for the performance of the Work.

PART 2 - PRODUCTS

2.01 FORMS

- A. General: Wood or steel, straight, and of sufficient strength to resist springing during depositing and consolidating the concrete. The outside forms shall have a height equal to the full depth of the curb and or gutter. The inside form of the curb shall have a batter as indicated and shall be securely fastened to and supported by the outside form.
- B. Wood forms: Straight, free from warp, twist, loose knots, splits, or other defects, having a nominal length of 10 feet, with a minimum of 3 stakes per form, at maximum spacing of 4 feet. Corners, deep sections, and radius bends shall have additional stakes and braces as required. Radius bends may be formed with 3/4 inch boards, laminated to the required thickness.
- C. Steel Forms: Shall be channel-formed sections with a flat top surface and with welded braces at each end and at not less than 2 intermediate points. From ends shall be interlocked and self aligning. Forms shall include flexible forms for radius forming, corner forms, form spreaders, and fillers. Forms shall have a nominal length of 10 feet, with a minimum of 2 welded stake pockets per form. Stake pins shall be solid steel rods with chamfered heads and pointed tips, designed for use with steel forms. Rigid forms shall be provided for curb returns, except that benders of thin plank forms may be used for curb or curb returns with a radius of 10 feet or more, where grade changes occur in the return, or where the central angle is such that a rigid form with a central angle of 90 degrees cannot be used. Back forms for curb returns may be made of 1/2 inch benders, for the full height of the curb, cleated together. Steel, wood, or other suitable material of size and strength to resist movement during concrete placement and to retain horizontal and vertical alignment until removal. Use straight forms free of distortion and defects. Coat forms with non-staining form release agent that will not discolor or deface surface of concrete.

2.02 REINFORCING MATERIALS

- A. Fibrous Concrete Reinforcement: 100% virgin polypropylene, MD Graded, fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
 1. Physical Characteristics:
 - Specific gravity: 0.91.
 - Fiber length: Multi-Design Gradation
- B. Reinforcing bars: ASTM A 615, Grade 60.

2.03 CONCRETE

- A. General: Comply with provisions of Section 033000.
- B. Design and Strength at 28 days:
 1. Class A, 3000 psi for curbs and walks.
- C. Expansion joints: Flexible, modified PVC (polyvinyl chloride) type, approximately 1 inch deep by 3/8 inch wide.
- D. Curing: Membrane Curing Compound, comply with provisions of Section 03300.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which the work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the

Work. Do not proceed until satisfactory conditions have been corrected.

- 3.02 FINAL PREPARATION OF SUBGRADE
 - A. Pavement subgrade shall be compacted for a depth of 18 inches below the bottom of the slab to 98% of Standard Proctor maximum density, ASTM D698.
 - B. After rough grading operations have been completed, final grade to provide thickness, lines, grades and cross-section indicated. Broom the surface clean and free from all loose materials.

- 3.03 FORM CONSTRUCTION
 - A. Set forms to required grades and alignment, rigidly braced and secured.
 - B. Install sufficient quantities of forms to allow continuous progress of work and so that forms can remain in place at least 24 hours after concrete placement.

- 3.04 FIBROUS CONCRETE REINFORCEMENT
 - A. All exterior concrete slabs, walks, pads and pavements shall be reinforced with Fibrous Concrete Reinforcement.
 - B. Application rate shall be 1.5 pounds of fiber per cubic yard of concrete.
 - C. Add fibrous concrete reinforcement to concrete materials at the time concrete is batched in amounts in accord with manufacturer's recommendations for each type of concrete required. Mix concrete for uniform and complete distribution of fibrous reinforcement.
 - D. Comply with manufacturer's product data including product technical bulletins, product catalog, installation instructions and product carton instructions.

- 3.05 CURB AND GUTTER
 - A. Curb and gutter shall be constructed in accordance with Florida DOT Standard Details and Specifications.

- 3.06 PLACING AND FINISHING CONCRETE
 - A. Place concrete to thickness indicated, on a stabilized subgrade in properly prepared forms.
 - B. Wood float with swirling motion and before concrete sets, provide a light broom finish.
 - C. Crown or slope walks with a slope as indicated or if not indicated with a slope of not less than 1/8" per foot but not exceeding handicap accessible route requirements as indicated on the drawings.
 - D. Provide sawcut control joints extending 1/3 depth of the concrete as indicated on the drawings or if not indicated at distances not exceeding 1.0 times the width of the walk.
 - E. Provide expansion joints where indicated on the drawings or if not indicated at distances not exceeding 50 feet.

- 3.07 CURING AND PROTECTION
 - A. General: Protect concrete against loss of moisture and rapid temperature changes for at least seven days from the beginning of the curing operation.
 - B. Initial Curing: Immediately after the concrete has been finished, and after the water sheen has disappeared, the surface of the concrete shall be promptly covered with a liquid membrane curing compound as specified.
 - C. Final curing: The entire exposed surface shall be covered with a pigmented membrane-forming curing compound. Apply in two coats at a coverage rate of 400 square feet per gallon for each coat. Apply the second coat in a direction perpendicular to the first coat. The application shall be uniform, continuous, free from pinholes, or other imperfections.

- 3.08 REPAIRS AND PROTECTION

- A. Repair or replace broken or defective concrete, as directed by the Engineer.
- B. Protect concrete from damage until acceptance of work. Exclude traffic for at least 14 days after placement. When construction traffic is permitted, maintain as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Sweep and wash free of stains, discolorations, dirt, and other foreign material just prior to final inspection.

END OF SECTION 02660.